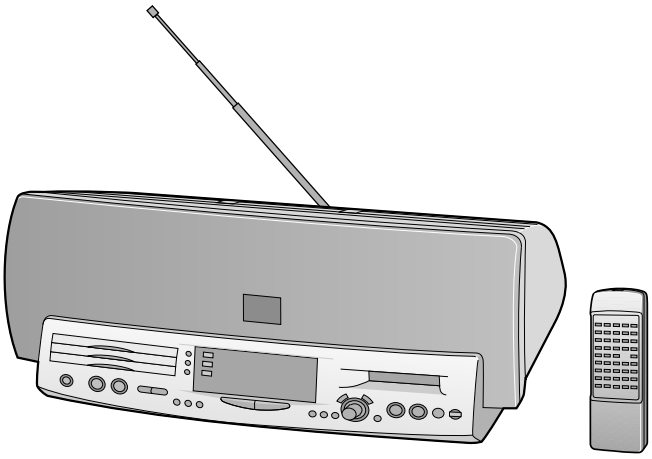
SHARP SERVICE MANUAL

No. S5734MDZV30H/



MD-ZV30H

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• In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified should be used.

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MD-ZV30H

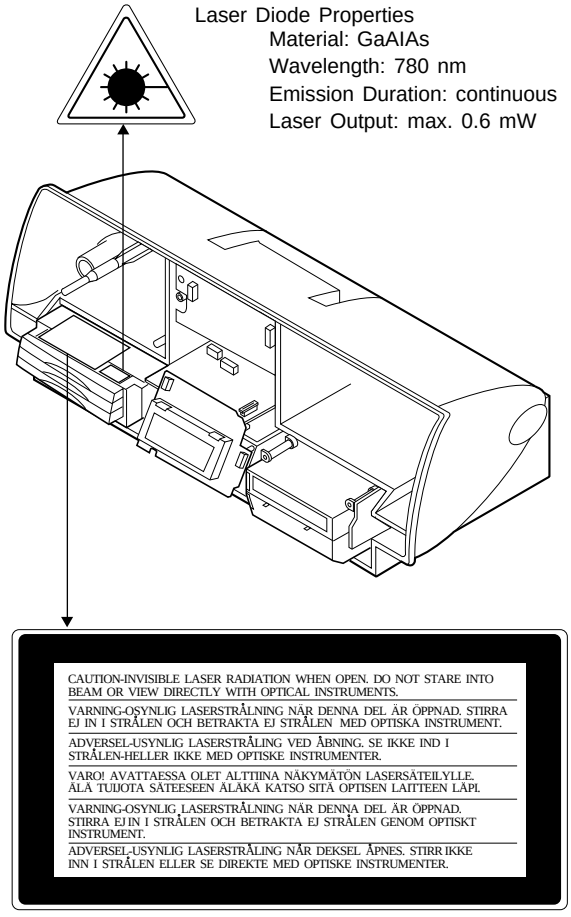
SAFETY PRECAUTION FOR SERVICE MANUAL (FOR UK ONLY)

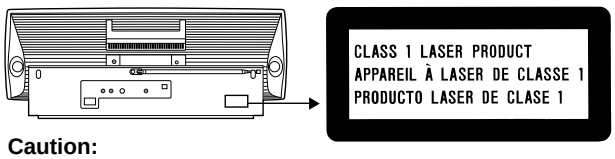
WARNINGS

The AEL (ACCESSIBLE EMMISSION LEVEL) of the laser power output is less than class 1 but the laser component is capable of emitting radiation exceeding the limit for class 1. Therefore it is important that the following precautions are observer during servicing to protect your eyes against exposure to the laser beam.

1) When the unit case cover is removed and LOADING SW (SW 1956) is turned on and then PLAY SW (SW 1954 mechanism PWB) is turned on in a few second.
The laser will light for several second to detect a disk.
2) The laser power output of the pickup unit and replacement service parts are all factory pre-set before shipment.
Do not attempt to re-adjust the laser pick-up unit during replacement or servicing.
3) Under no circumstances stare into the pickup lens at any time.
4) If laser optical unit becomes faulty, replace the complete laser optical unit.
5) CAUTION-USE of controls or adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Diode Properties
Material: GaAlAs
Wavelength: 780 nm
Emission Duration: continuous
Laser Output: max. 0.6 mW

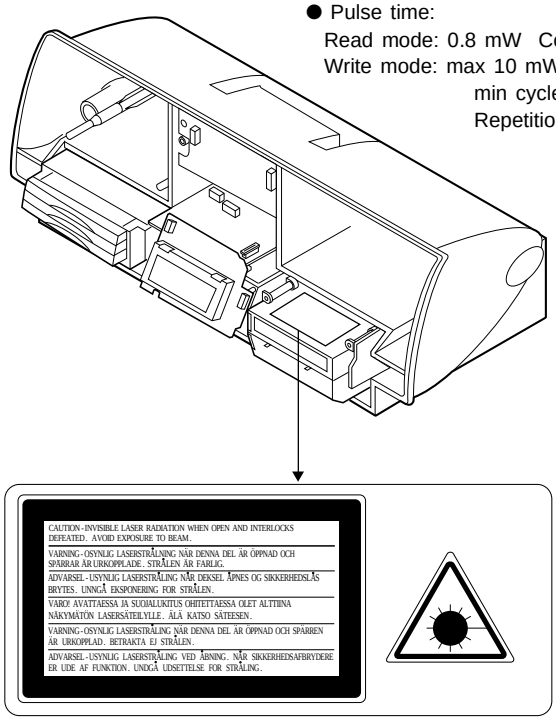

CAUTION-INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.
VARNING-OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ IN I STRÅLEN OCH BETRAKTA EJ STRÅLEN MED OPTISKA INSTRUMENT.
ADVERSEL-USYNLIG LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN-HELLER IKKE MED OPTISKE INSTRUMENTER.
VARO! AVATTAESSA OLET ALTTIINA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ TUIJOTA SÄTEESEEN ÄLÄKÄ KATSO SITÄ OPTISEN LAITTEEN LÄPI.
VARNING-OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ IN I STRÅLEN OCH BETRAKTA EJ STRÅLEN GENOM OPTISKT INSTRUMENT.
ADVERSEL-USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. STIRR IKKE INN I STRÅLEN ELLER SE DIREKTE MED OPTISKE INSTRUMENTER.

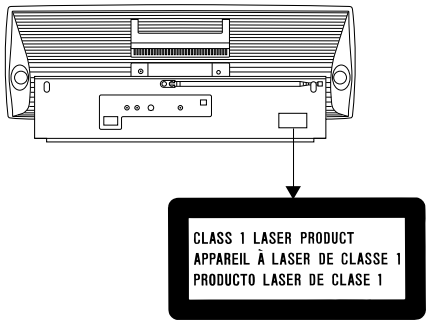


Caution:
Use the MD studio only in accordance with the instructions given in this manual and do not attempt to interfere with the interlock switch or make any other adjustment as this may result in exposure to hazardous radiation.

(FOR UK)

Laser Diode Properties
- Material: GaAlAs
- Wavelength: 785 nm
- Pulse time:
  Read mode: 0.8 mW Continuous
  Write mode: max 10 mW 0.5 S
  min cycle 1.5 S
  Repetition


CAUTION-INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
VARNING-OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRRAR ÄR URKOPPLADE. STRÅLEN ÄR FARLIG.
ADVARSEL-USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEN.
VARNING-OSYNLIG LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVARSEL-USYNLIG LASERSTRÅLING VED ÅBNING. NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSETTELSE FOR STRÅLING.



LASER KLASSE 1
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT
LASER TŘÍDY 1
LASER TRIEDY 1

(FOR Europe)

VARO ! Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.
VARNING! Osynlig laserstralning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

Precaution to be taken when replacing and servicing the laser pickup.
The following precautions must be observed during servicing to protect your eyesvagainst exposure to the laser.

Warning of possible eye damage when repairing:
If the AC power plug is connected when the inner cover of the unit is removed, the laser will light up during focus access (about 1 second) (Fig. 3-1).
During this operation, the laser will leak from the opening between the magnetic head and cartridge holder (Fig. 3-2).
In order to protect your eyes, you must not look at the laser during repair.
Before repairing, be sure to disconnect the AC power plug.

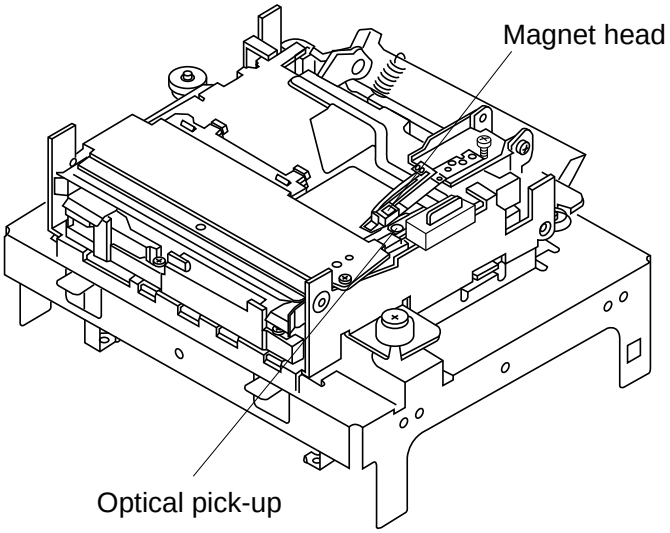


Figure 3-1

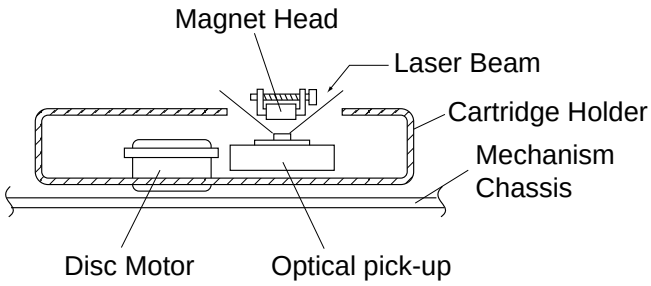
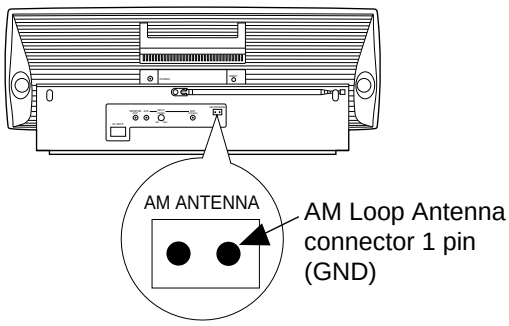


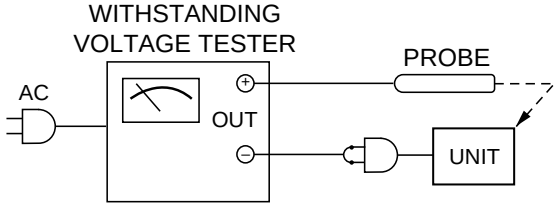
Figure 3-2

IMPORTANT SERVICE NOTES (FOR UK ONLY)

Before returning the unit to the customer after completion of a repair or adjustment it is necessary for the following withstand voltage test to be applied to ensure the unit is safe for the customer to use.
Setting of Withstanding Voltage Tester and set.

Set name	Set value
Withstanding Voltage Tester	
Test voltage	4,240 VPEAK 3,000 VRMS
Set time	6 secs
Set current (Cutoff current)	4 mA
Unit	
Judgment	
OK: The “GOOD” lamp lights. NG: The “NG” lamp lights and the buzzor sounds.	





MD-ZV30H

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

SPECIFICATIONS

(MiniDisc recorder section)

Type:	MiniDisc recorder
Signal readout:	Non-contact, 3-beam semi-conductor laser pickup
Rotational speed:	400 - 900 rpm CLV, Approx
Error correction:	ACIRC (Advanced Cross Inter-leave Reed-Solomon Code)
Quantization:	16 bit linear
Coding:	ATRAC (Adaptive TRansformed Acoustic Coding)
Sampling frequency:	44.1 kHz
Recording method:	Magnetic modulation overwrite method
Filter:	8-times oversampling digital filter
Frequency response:	20 - 20,000 Hz (+0/-2 dB)
D/A converter:	1-bit D/A converter
Signal/noise ratio:	95 dB (1 kHz)
Dynamic range:	90 dB (1 kHz)
Wow and flutter:	Unmeasurable (less than 0.001% W. peak)
Audio channel:	Stereo 2 channel
T.H.D at 1 kHz:	0.1 %

(Compact disc player)

Type:	3-disc multi-play compact disc player
Signal readout:	Non-contact, 3-beam semi-conductor laser pickup
Rotational speed:	200 - 500 rpm CLV, Approx.
Error correction:	CIRC (Cross Interleave Reed-Solomon Code)
Quantization:	16 bit linear
Filter:	8-times oversampling digital filter
Frequency response:	20 - 20,000 Hz (+0/-2 dB)
D/A converter:	1-bit D/A converter
Signal/noise ratio:	95 dB (1 kHz)
Dynamic range:	90 dB (1 kHz)
Wow and flutter:	Unmeasurable (less than 0.001% W. peak)

(Tuner section)

Frequency range:	FM; 87.5 - 108 MHz AM; 522 - 1,620 kHz
Sensitivity:	FM; 2.5 μV AM; 800 μV/m

(General)

Power source:	AC 230 V, 50 Hz
Power consumption:	69 W
Output power:	● For European customers PMPO; 90 W MPO; 21 W (10.5 W + 10.5 W) (DIN 45 324) RMS; 15 W (7.5 W + 7.5 W) (DIN 45 324) ● For U.K. customers MPO; 21 W (10.5 W + 10.5 W) (10 % T.H.D.) RMS; 15 W (7.5 W + 7.5 W) (10 % T.H.D.)
Input terminals:	Auxiliary (analogue); 280 mV/47 kohms Microphone; 600 ohms
Output terminals:	Headphones; 16 - 50 ohms (recommended; 32 ohms) Monitor output; 1.7 V (1 kohm)
Dimensions:	Width; 550 mm (21-11/16") Height; 219 mm (8-5/8") Depth; 309 mm (12-3/16")
Weight:	7.6 kg (16.8 lbs.)

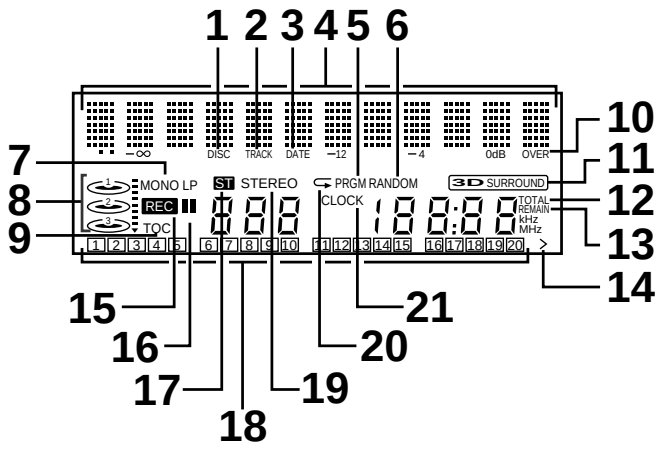
(Timer/clock)

Type:	Digital clock with date function
Timer:	ON/OFF, once a day

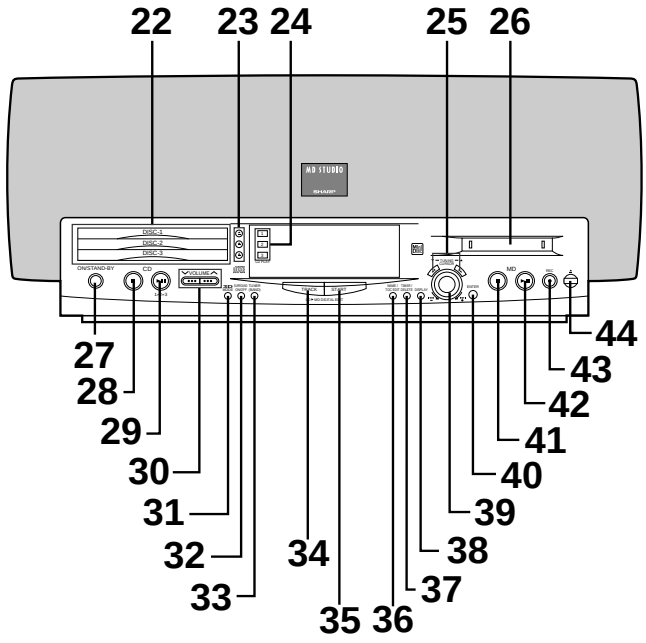
Specifications for this model are subject to change without prior notice.

NAMES OF PARTS

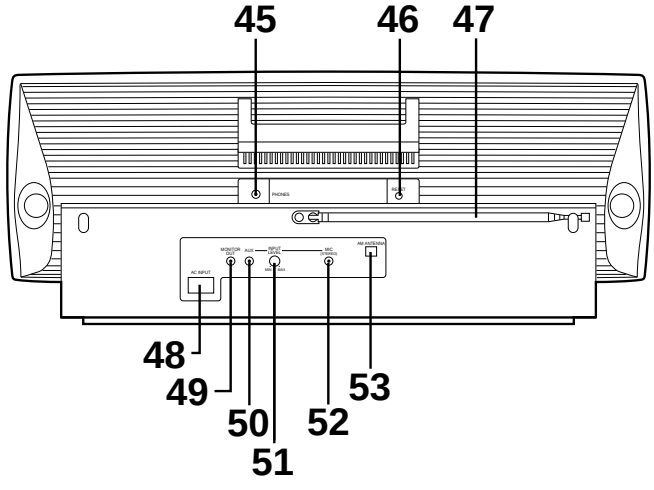
● Display window



1. Disc Name Indicator
2. Track Name Indicator
3. Date Indicator
4. Level Meter/Character Information Display
5. Programme Indicator
6. Random Play Indicator
7. Monaural Long-Play Mode Indicator
8. Disc Indicators
9. MD TOC Indicator
10. Recording Level Too High Indicator
11. 3D Surround Indicator
12. Total Time Indicator
13. Remaining Time Indicator
14. More Tracks Indicator
15. MD Record Indicator: REC
16. MD Pause Indicator: ❚❚
17. FM Stereo Indicator: ST
18. Music Schedule/Preset Number Indicators
19. FM Stereo Mode Indicator
20. Repeat Indicator: ⮌
21. Clock Indicator



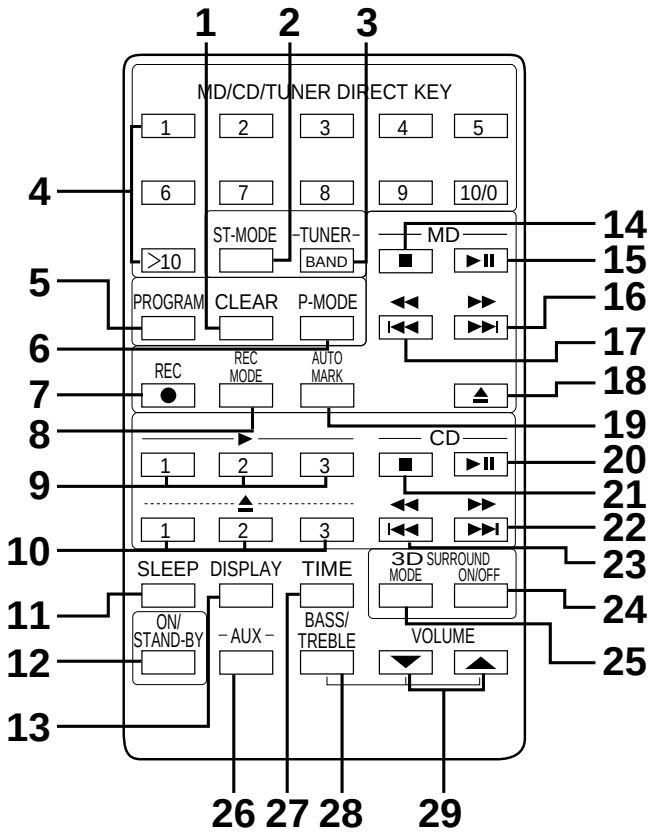
22. CD Disc Trays
23. CD Eject Buttons
24. CD Play Buttons
25. Tuning/Cursor Buttons
26. MD Loading Slot
27. On/Stand-by Switch
28. CD Stop Button: ■
29. CD Play/Pause Button: ►❚❚
30. Volume Up/Down Buttons: ∨/∧
31. 3D Surround Mode Select Button
32. 3D Surround On/Off Button
33. Tuner Call (Band Select) Button
34. CD Track Select Button
35. CD Edit Button
36. Name/TOC-Edit Button
37. Timer/Delete Button
38. Display Button
39. Jog Dial
40. Enter Button
41. MD Stop Button: ■
42. MD Play/Pause Button: ►❚❚
43. MD Record Button: ●
44. MD Eject Button: ▲

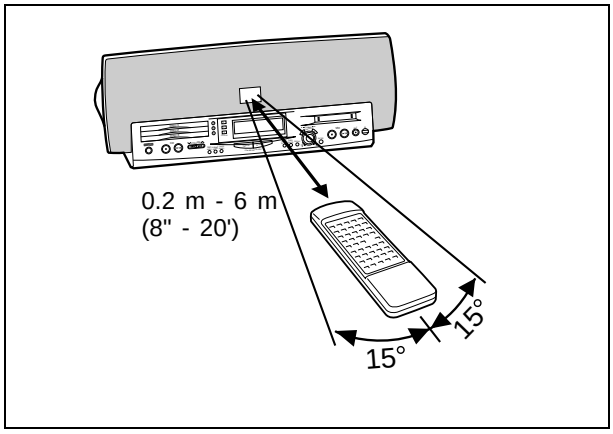


45. Headphone Socket
46. Reset Button
47. FM Telescopic Rod Aerial
48. AC Power Input Socket
49. Monitor Output Socket
50. Auxiliary Input Socket
51. Auxiliary Input Level Control
52. Microphone Socket
53. AM Loop Aerial Input Socket

■ Names of controls

1. **Clear Button**
2. **FM Stereo Mode Button**
3. **Tuner Call (Band Select) Button**
4. **Tuner Preset/CD/MD Track Number Input Buttons**
5. **Programme Button**
6. **Play Mode Button**
7. **MD Record Button: ●**
8. **MD Record Mode Button**
9. **CD Play Buttons**
10. **CD Eject Buttons**
11. **Sleep Button**
12. **On/Stand-by Button**
13. **Display Button**
14. **MD Stop Button: ■**
15. **MD Play/Pause Button: ►II**
16. **MD Track Up/Cue Button: ►►/►►I**
17. **MD Track Down/Review Button: ◄◄/I◄◄**
18. **MD Eject Button**
19. **Auto Mark Button**
20. **CD Play/Pause Button: ►II**
21. **CD Stop Button: ■**
22. **CD Track Up/Cue Button: ►►/►►I**
23. **CD Track Down/Review Button: ◄◄/I◄◄**
24. **3D Surround On/Off Button**
25. **3D Surround Mode Select Button**
26. **Auxiliary Select Button**
27. **Time Display Select Button**
28. **Bass/Treble Select Button**
29. **Volume Up/Down Buttons: ▼ / ▲**





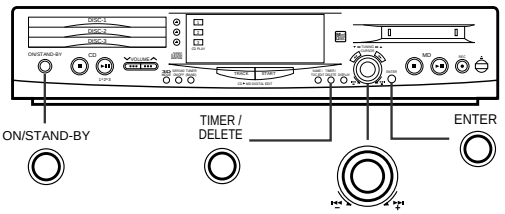
■ Proper use of the remote control

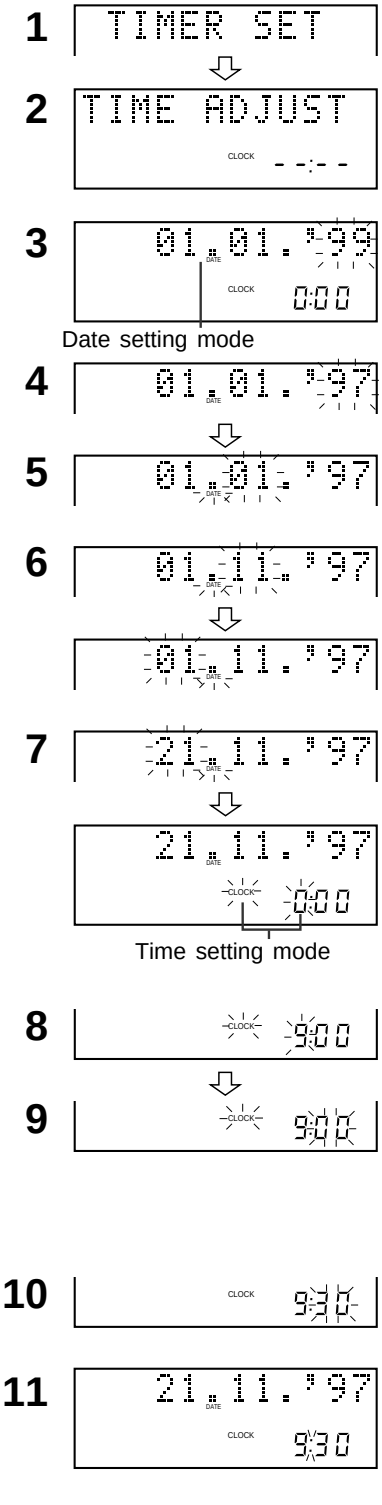
Notes concerning use:

- Replace the batteries if control distance decreases or operation becomes erratic.
- Periodically clean the transmitter window on the remote control and the sensor on the main unit with a soft cloth.
- Exposing the sensor on the main unit to strong light may interfere with operation. Change the lighting or the direction of the unit.
- Keep the remote control away from moisture, excessive heat, shock, and vibrations.

OPERATION MANUAL

SETTING THE CLOCK





When recording, the date and time are recorded on the MiniDisc (page 18), but only when the date and time have been previously entered, as described in the instructions below.

■ Setting the date

1 Set the ON/STAND-BY switch to ON and press the TIMER/DELETE button.

2 Within 10 seconds, turn the jog dial until "TIME ADJUST" appears.

3 Within 10 seconds, press the ENTER button.

- The unit will enter the date setting mode.

4 Set the "year" using the jog dial.

- When you turn the jog dial and let go, the year will change up or down by one. When you turn and hold it, the year will change continuously.
- The year 2000 or later is set as follows:
  [00] indicates the year 2000.
  [01] indicates the year 2001.

5 Press the ENTER button to set the "year".

6 Set the "month" repeating steps 4 and 5.

7 Set the "day" repeating steps 4 and 5.

- The unit will enter the date setting mode.

8 Set the "hour" using the jog dial.

- When you turn the jog dial and let go, the hour will change up or down by one. When you turn and hold it, the hour will change continuously.
- The clock uses the 24-hour system.

9 Press the ENTER button to set the "hour".

10 Adjust the "minute" using the jog dial.

11 Press the ENTER button to set the "minute".

- When the ENTER button is pressed, the clock will show the correct time.

Note:

- If a power failure continues for more than 10 minutes or the AC power lead is disconnected for more than 10 minutes, the date and time settings will be lost.
  If they are lost, set them again.

Checking the date and time:

After pressing the TIMER/DELETE button, turn the jog dial until the date and time are displayed.

Resetting the date and time:

See "Setting the clock".

- Once you have set the date and time, "TIME ADJUST" will not be displayed in step 2. Turn the jog dial to make the date and time appear.
- If you don't need to change the settings, just press the ENTER button without turning the jog dial again.

MINIDISC SYSTEM LIMITATIONS

Even if the maximum recording time of a MiniDisc has not been reached, "TOC FULL" may be displayed.	In the MD system, the delimiter of the recording area on an MD is programmed in a TOC. If partial erasing, recording and editing are repeated several times, TOC information will fill up, even though the number of tracks has not reached the limit (255 tracks), and further recording will be impossible. (If you use the all erase function, this MD can be used from the beginning.)
Even if the maximum recording time of a MiniDisc has not been reached, "DISC FULL" may be displayed.	If there is any flaw on the MiniDisc, that part is automatically excluded from the space available for recording. Therefore, the recording time becomes shorter.
Even if several short tracks are erased, the remaining recording time may not show an increase.	When the remaining recording time of a disc is displayed, short tracks less than 12 seconds long may not be included in the total.
Two tracks may not be combined in editing.	For MiniDiscs on which repeated recording and editing operations were performed, the COMBINE function may not work. A track recorded from a CD (digital recording) and a track recorded from a radio or other equipment (analogue recording) cannot be combined.
The total of the recorded time and time remaining on a disc may not add up to the maximum possible recording time.	A cluster (about 2 seconds) is normally the minimum unit of recording. So, even if a track is less than 2 seconds long, it will use about 2 seconds of space on the disc. Therefore, the time actually available for recording may be less than the remaining time displayed. If there are scratches on discs, those sections will be automatically avoided (no recording will be placed in those sections). Therefore, the recording time will be reduced.
If recorded tracks are fast reversed or fast forwarded, the sound may skip.	An MD which was recorded or edited repeatedly may skip during fast reverse or fast forward.

TROUBLESHOOTING

■ If a problem occurs

If this unit functions abnormally during operation, first check the following items. If the unit continues to function abnormally, or if an abnormality appears other than listed below, turn off the player's power and disconnect the AC power plug, then consult your SHARP dealer or service personnel.

●General

SYMPTOM	POSSIBLE CAUSE	REMEDY
● The clock is wrong.	● Did a power failure occur?	● Try setting it again.
● When a button is pressed, the unit does not respond.		● Turn the power off and on again, and then retry the operation.
● No sound is heard.	● Is the volume level is set to "0"? ● Are the headphones connected?	● Increase the volume level. ● Disconnect the headphones.
● Radios make unusual noise or the picture on the TV screen is distorted.	● When a radio or TV which uses an indoor aerial is placed near the unit, the picture on the TV screen may be distorted or the radio may not function properly.	● It is recommended that you use an external aerial.

●CD playback

SYMPTOM	POSSIBLE CAUSE	REMEDY
● Even though a disc has been loaded, "NO DISC" or "ERROR" is displayed. ● Playback stops in the middle of a track, or playback is not performed properly. ● Playback sounds are skipped.	● The disc is loaded up-side down. ● The disc is very dirty. ● The disc which does not satisfy the standards. ● Is the unit located near excessive vibrations? ● Has condensation formed inside the unit?	● Load the disc with the correct side up. ● Clean the disc. ● Load the correct disc. ● Place the unit on a firm, level surface free from vibration. ● Remove the disc and leave the power turned on. The unit should function properly in about 1 hour.

●MD recording and playback

SYMPTOM	POSSIBLE CAUSE	REMEDY
● A recording cannot be made.	● Is the MiniDisc protected against accidental erasure? ● Did you try to make recording on a playback-only MiniDisc? ● Can you see the "TOC FULL" message in the display?	● Slide the accidental erase prevention tab back to its original position. ● Replace it with a recordable disc. ● Put in another recordable disc with recording space on it.
● Even though a disc has been loaded, "NO DISC" or "ERROR" is displayed. ● Playback sounds are skipped.	● The disc is very dirty. ● Is the unit located near excessive vibrations? ● Has condensation formed inside the unit?	● Clean the disc. ● Place the unit on a firm, level surface free from vibration. ● Remove the disc and leave the power turned on. The unit should function properly inabout 1 hour.

●Radio reception

SYMPTOM	POSSIBLE CAUSE	REMEDY
● Radios make unusual noise consecutively.		● When the unit receives a radio broadcast near a TV set, a computer or a wordprocessor, it may pick up noise. If this happens, try to move the unit from the place where the noise is picked up.
● The preset channel cannot be called.	● Did a power failure occur?	● Preset the channel again.

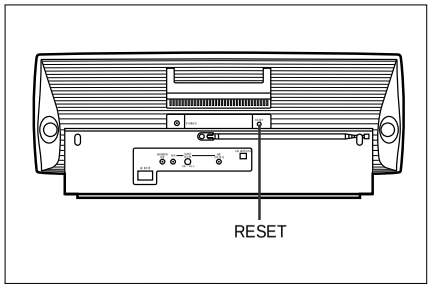
●Remote control

SYMPTOM	POSSIBLE CAUSE	REMEDY
● The remote control does not function or does not operate properly.	● The batteries (polarity) are not inserted properly. ● The batteries inside the remote control are dead. ● The remote control is operated from an incorrect distance or angle.	● Insert properly. ● Replace the batteries. ● Operate it within a range of 0.2 m (8") to 6 m (20') and within an angle of 15° to either side of centre.
● The power cannot be turned on from the remote control.	● Is the AC power lead plugged in?	● Connect the AC power lead.

(Continued)

When an error message is displayed, proceed as follows:

Error messages	Meaning	Remedy
BLANK MD	● Nothing is recorded.	● Replace the disc with a recorded disc.
Can't COPY	● You tried to record from a copy-protected disc.	● Replace it with a regular disc that can be copied.
Can't EDIT	● A track cannot be edited.	● Change the stop position of the track and then try editing it.
Can't REC	● Recording cannot be performed correctly due to vibration or shock in the unit.	● Re-record.
Can't T REC	● Timer recording is impossible or there is no available space on the MD.	● Replace it with another disc.
CH ERROR	● There is something wrong with the CD changer.	● Turn the power off and then back to on, and press the button.
DEFECT	● Since this disc has scratches on it, the recording operation was skipped.	● Replace the disc with another recordable disc.
DISC ERR	● The disc is damaged. ● A TOC is not written on the MD or there is something wrong with data.	● Reload the disc or replace it.
DISC FULL	● The disc is out of recording space.	● Replace the disc with another recordable disc.
EDIT OVER	● There is no space to make CD editing on the disc.	● Replace it with a disc that has enough time to record.
MD ERROR	● No operation	● Contact the shop where you purchased the unit.
MECHA ERR* (*: Number or symbol)	● There is a mechanical problem and the disc is not working properly.	● Turn off the power, and press the button.
NAME FULL	● The number of characters for the disc name or track name exceeds 40.	● Shorten the disc or track name.
NO DISC	● A disc has not been loaded. ● The disc data cannot be read.	● Load a disc. ● Reload the disc.
NOT AUDIO	● The data recorded on this disc is not audio data.	● Select another track. ● Replace the disc.
PLAYBACK MD	● You tried to record on a playback-only disc.	● Replace it with a recordable disc.
PROTECTED	● The disc is write protected.	● Move the write protection tab back to its original position.
TEMP OVER	● The temperature is too high.	● Turn off the power, and wait for a while.
TOC ERR* (*: Number or symbol)	● The disc is damaged. ● TOC information cannot be read. ● MD not specified.	● Replace it with another disc.
TOC FULL* (*: Number or symbol)	● There is no space to programme track numbers.	● Replace it with another recordable disc.
TOC FULL 1	● There is no space left for recording character information (track names, disc names,etc.).	● Replace it with another recordable disc.
TOC W ERROR	● Recording is impossible.	● Contact the shop where you purchased the unit.
TRAY ERROR	● The CD tray operates incorrectly.	● Unplug the AC power lead, plug it back, and then turn the power on.
U TOC ERR* (*: Symbol)	● TOC information recorded on the MD does not match the MD specifications or it cannot be read.	● Replace it with another disc. ● Erase all of the tracks, and try recording.
U TOC W ERR	● The TOC information could not be created properly due to a mechanical shock or to scratches on the disc.	● Turn off the power, and try to write the TOC again. (Remove any source of shock or vibration whilst writing.)
? DISC	● The data contains an error.	● Replace it with another disc.
0 0:00	● Music is not being recorded.	● Replace the disc with another recordable disc.



■ Moisture condensation

In the following cases, condensation may form inside the unit.

- Shortly after turning on a heater.
- When the unit is placed in a room where there is excessive steam or moisture.
- When the unit is moved from a cool place to a warm place.

When the unit has condensation inside, the disc signals cannot be read, and the product may not function properly.

- If this happens, remove the disc. The condensation should evaporate in approximately 1 hour. The unit will then function properly.

■ If a problem occurs

If this product is subjected to strong external interference (mechanical shock, excessive static electricity, abnormal supply voltage due to lightning, etc.) or if it is operated incorrectly, it may malfunction or the display may not function correctly. If such a problem occurs, do the following:

Connect the AC power lead to the AC socket, and press the RESET button once on the rear of the main unit.

- When the RESET button is pressed, all of the settings in memory will be erased.
- If strange sounds, smells or smoke come out of the unit or if a foreign object falls into the unit, turn off the power, unplug the AC power lead from the AC socket, immediately. Contact the shop where you purchased the unit.

DISASSEMBLY

Caution on Disassembly

When disassembling the machine or assembling it after repair, observe the following instructions so as to ensure safety and keep its performance.

1. Unload the compact disc, and mini-disc from the machine.
2. Be sure to unplug the power cable before starting disassembly of the machine.
3. When disassembling each section, remove the nylon band or wire holder as necessary.
   When assembling after repair, be sure to restore the initial wire arrangement.
   If a screw of improper length is fit to the MD mechanism (a screw to fit the part to the mechanism chassis of MD section), it may contact the optical pickup, impeding normal operation. Hence, due care must be taken.
4. While repairing, pay utmost attention to static electricity on ICs.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Cabinet	1. Screw ..... (A1) x2 2. Screw ..... (A2) x4 3. Screw ..... (A3) x6 4. Socket ..... (A4) x2	10-1
2	SRS PWB	1. Socket ..... (B1) x2 2. Screw ..... (B2) x2	10-2
3	MD Unit	1. MD Flat Cable ..... (C1) x1 2. Socket ..... (C2) x1 3. Screw ..... (C3) x2 4. Tip ..... (C4) x1	10-2
4	PWB Frame	1. Screw ..... (D1) x2 2. Screw ..... (D2) x1 3. Screw ..... (D3) x1 4. Socket ..... (D4) x7	10-2
5	CD Changer Block	1. Screw ..... (E1) x4	10-2
6	Display PWB	1. Screw ..... (F1) x4 2. Socket ..... (F2) x3	11-1
7	Tuner PWB	1. Screw ..... (G1) x2 2. Screw ..... (G2) x2	11-1
8	Main PWB	1. Screw ..... (H1) x3	11-1
9	Power PWB	1. Screw ..... (J1) x2 2. Screw ..... (J2) x4	11-2
10	CD Servo PWB (Note 1)	1. Socket ..... (K1) x3 2. Screw ..... (K2) x3	11-3
11	CD Changer PWB	1. Screw ..... (L1) x2 2. Socket ..... (L2) x2	11-3
12	Tray Switch PWB	1. Screw ..... (M1) x1	11-3
13	CD Mechanism	1. Screw ..... (N1) x2 2. Top Bord ..... (N2) x1 3. Disc Holder ..... (N3) x1 4. Disc Tray ..... (N4) x3 5. Screw ..... (N5) x1 6. Mechanism Holder Guide ..... (N6) x1 7. Mechanism Holder (N7) x1 8. Screw ..... (N8) x4	11-4
14	MD Mechanism Unit	1. Screw ..... (P1) x4 2. MD Mechanism Holder (P2) x2 3. Screw ..... (P3) x4 4. Flat Cable ..... (P4) x1	12-1
15	MD Main PWB (See page 12 Figure 12-4)	1. Screw ..... (Q1) x4 2. Socket ..... (Q2) x3 3. Flexible PWB ..... (Q3) x1	12-2
16	MD Mechanism	1. Screw ..... (R1) x4 2. Screw ..... (R2) x1 3. Spring ..... (R3) x1 4. Cartridge Holder .... (R4) x1	12-3

Note 1. After removing the connector for the optical pickup from the connector wrap the conducitive aluminum foil around the front end of connector so as to protect the optical pickup from electrostatic damage.

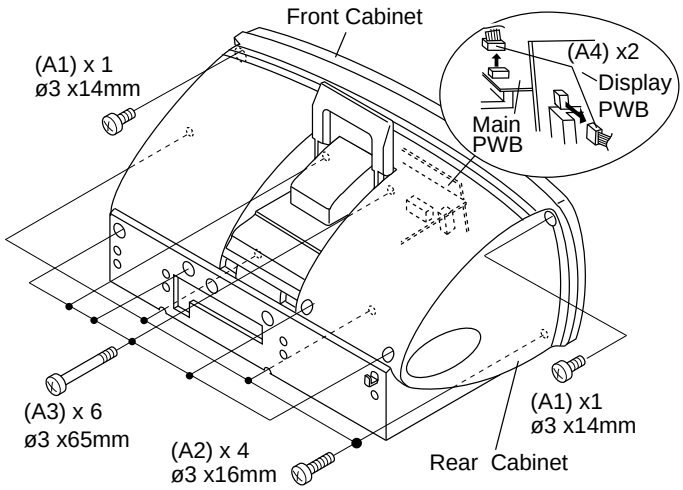


Figure 10-1

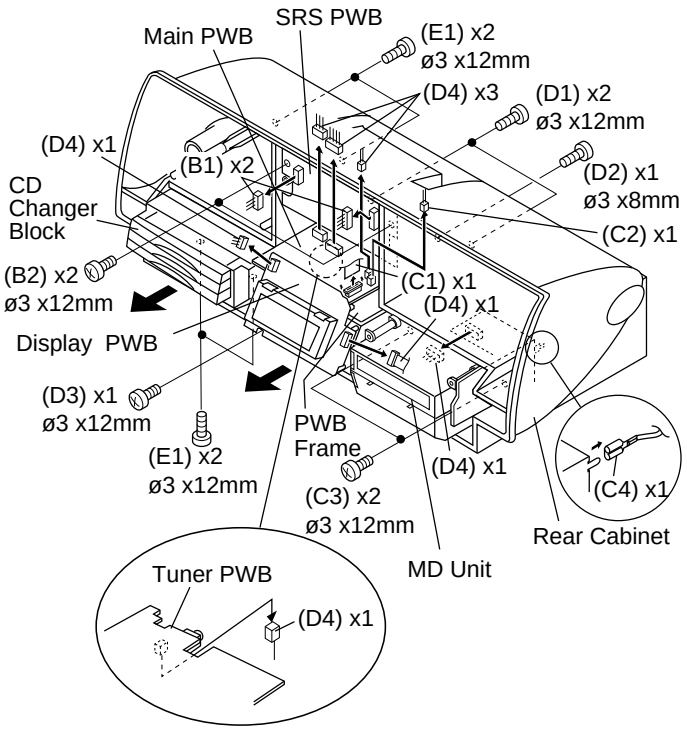


Figure 10-2

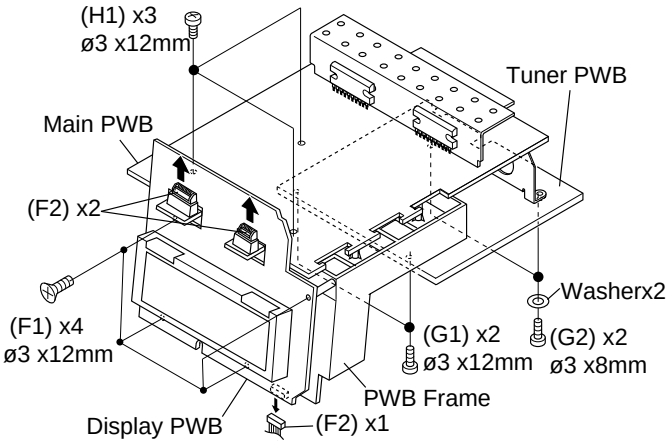


Figure 11-1

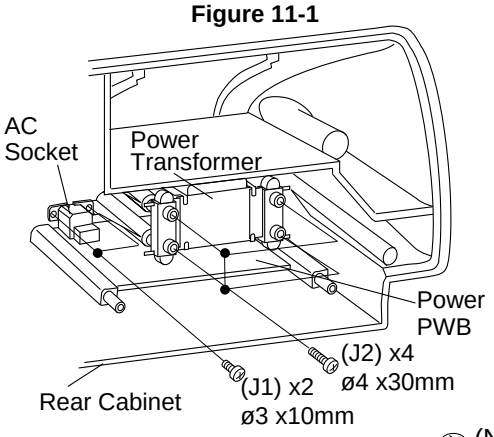


Figure 11-2

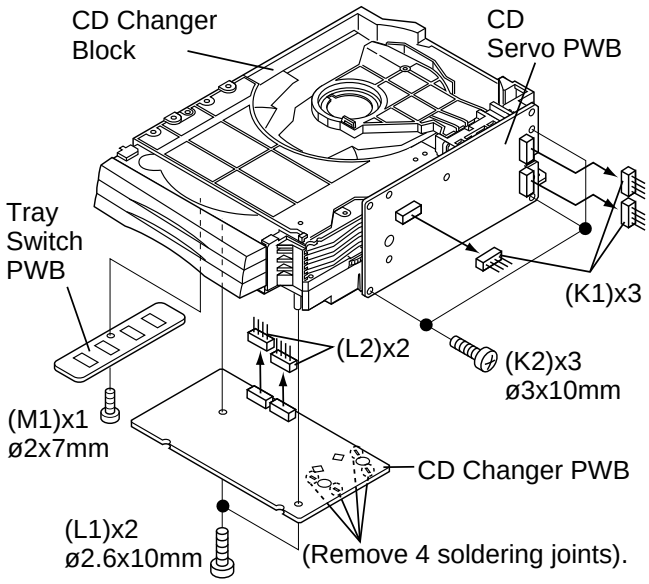
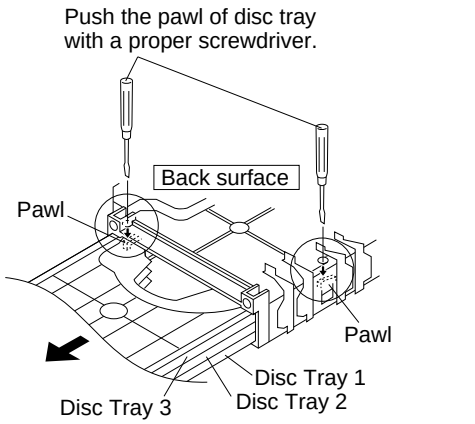


Figure 11-3



(After drawing out the disc trays 1, 2, and 3, turn over the mechanism unit, push two pawls, and remove successively the three disc trays from the mechanism unit, starting with the disc tray 3. Thereby the CD mechanism shown in the right figure can be removed.)

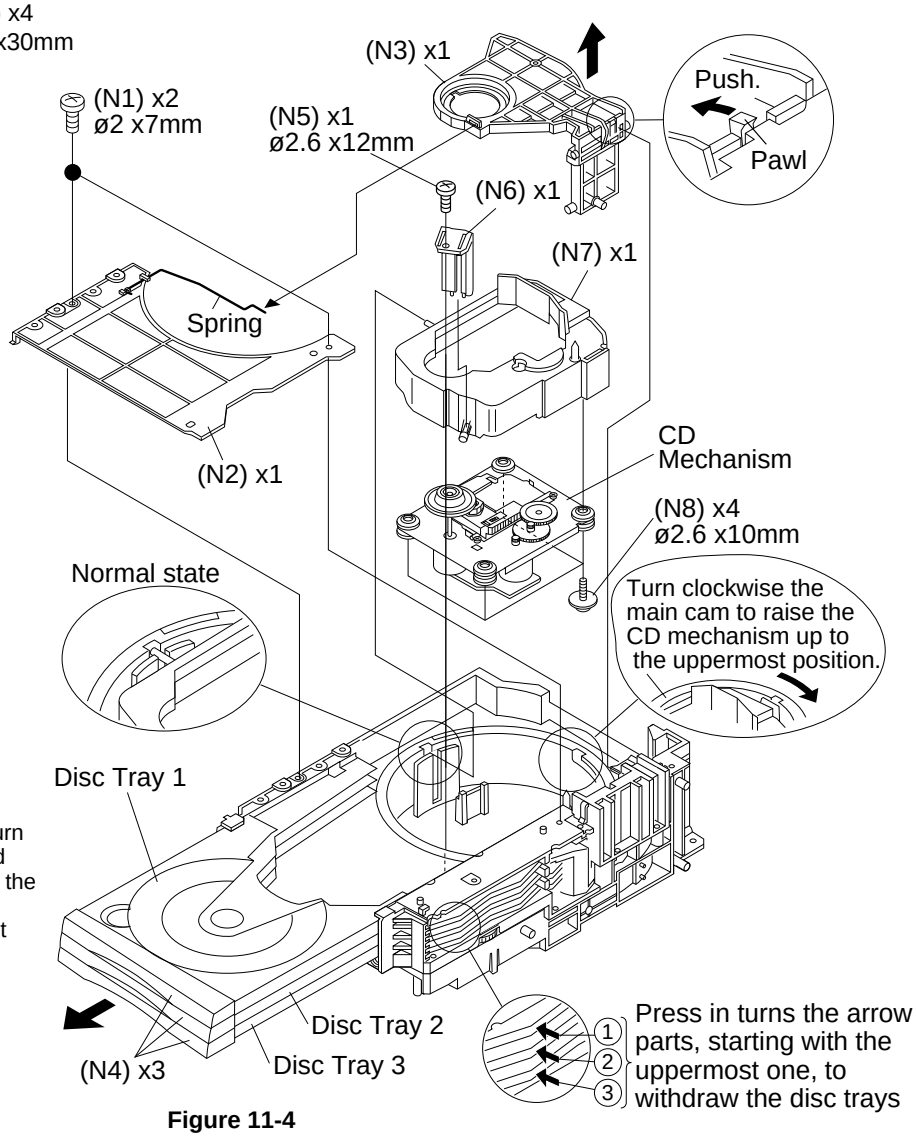


Figure 11-4

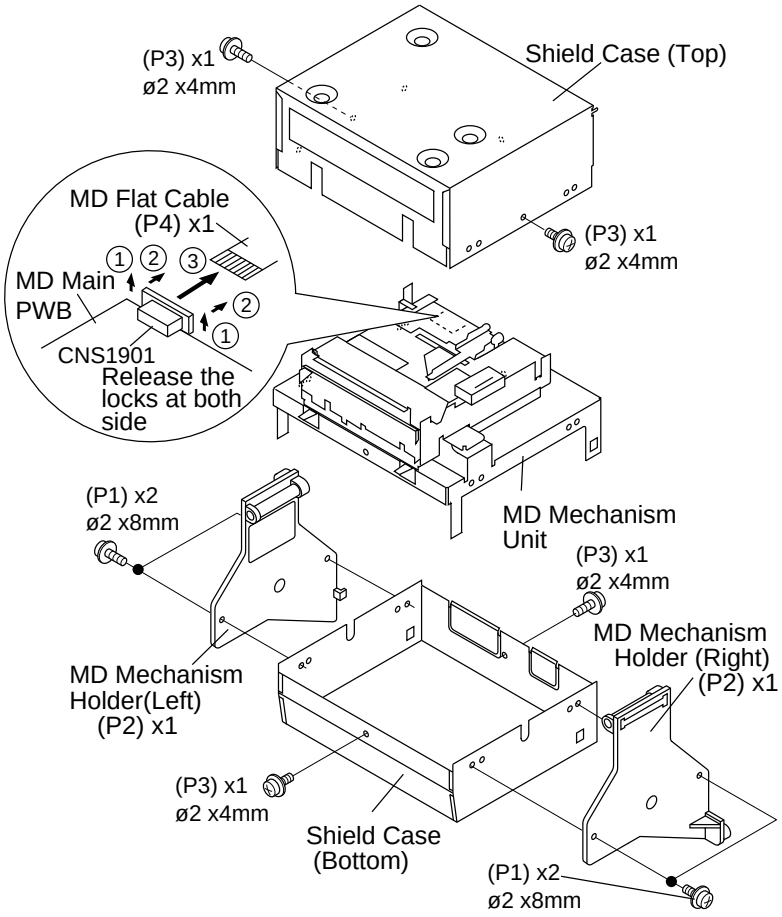


Figure 12-1

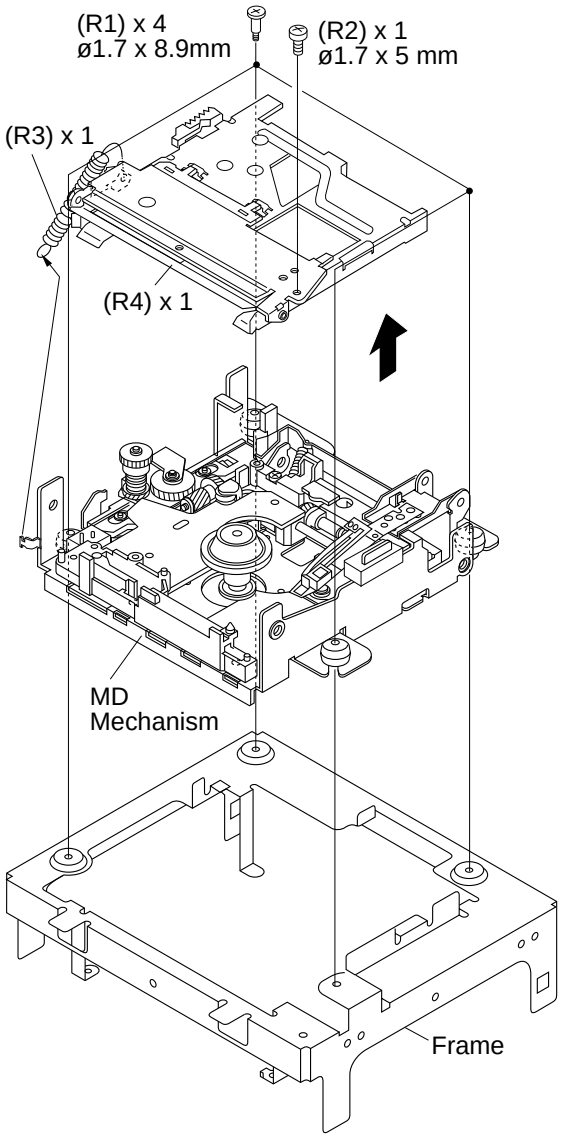
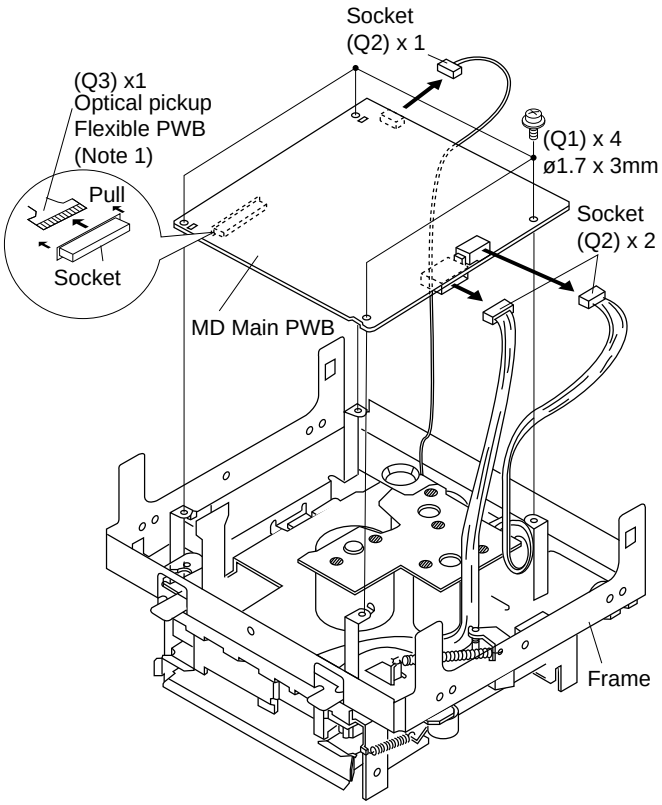
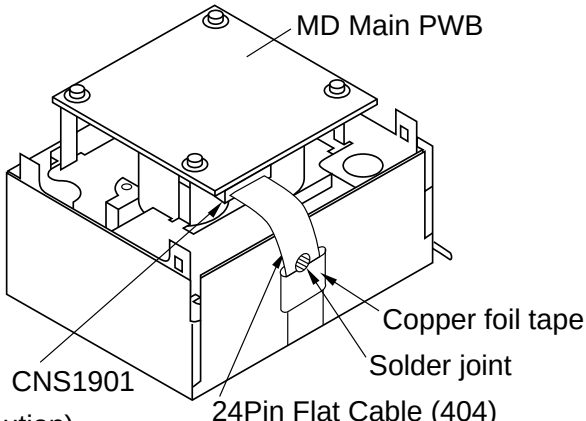


Figure 12-3



(Note 1) After removing the flexible PWB for optical pickup from the connector wrap the front end of flexible PWB in conductive aluminum foil so as to protect the optical pickup from being damaged electrostatically.

Figure 12-2



(Caution)
The copper foil tape is wound around the 24 pin flat cable (404) to ground them to the case. Fit them in the specified direction.

Figure 12-4

REMOVING AND REINSTALLING THE MAIN PARTS

MD MECHANISM SECTION

Remove the MD mechanism according to the disassembling procedure 1, 3, 14 to 16. (See p. 10.)

How to remove the motor PWB (See Fig. 13-1.)

1. Remove the solder joint (A1) x 6, and remove the motor PWB.

How to remove the disc motor (See Fig. 13-2.)

1. Remove the loading motor tightening screw, and disengage the spring (B1) x 1 engaged with the disc motor sleeve groove at the disc motor side.
2. Remove the screws (B2) x 3 pcs., and remove the disc motor.

Caution: Be careful so that the gear is not damaged.
(The damaged gear emits noise during searching.)

How to remove the slide motor/loading motor (See Fig. 13-3.)

1. Remove the screw (C1) x 4 pcs., and remove the slide motor/loading motor.

Caution: Be careful so that the gear is not damaged.
(The damaged gear emits noise during searching.)

How to remove the mechanism switch PWB (See Fig. 13-4.)

1. Remove the screw (D1) x 1 pc., (D2) x 2 pcs., and (D3) x 2 pcs., and remove the mechanism switch PWB.

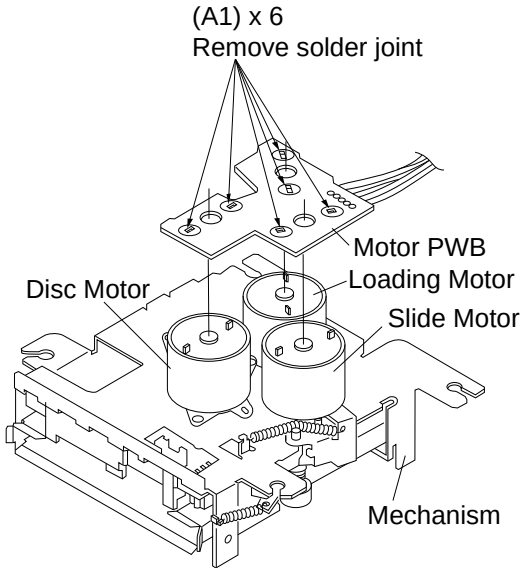


Figure 13-1

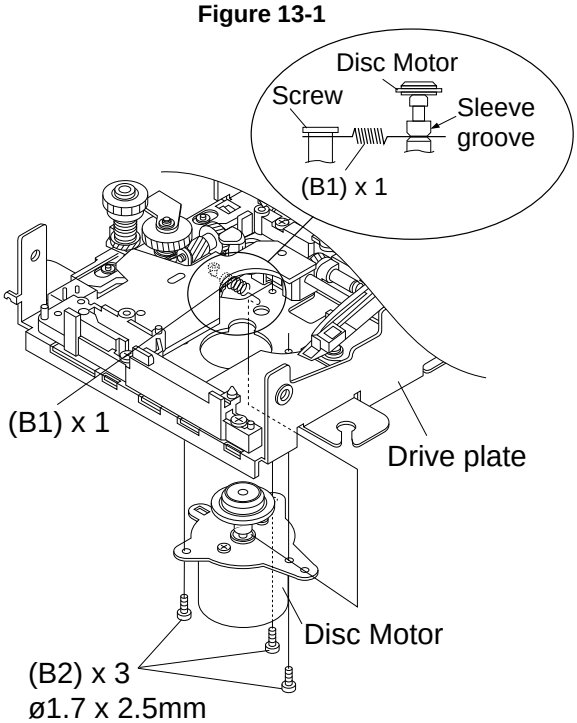


Figure 13-2

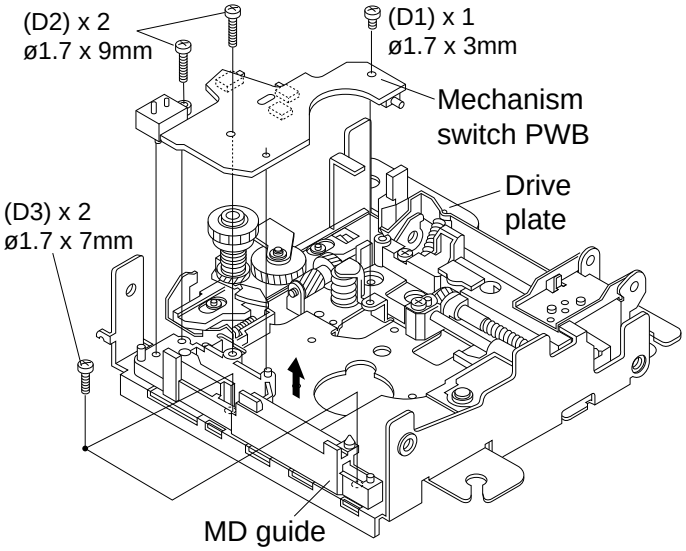


Figure 13-4

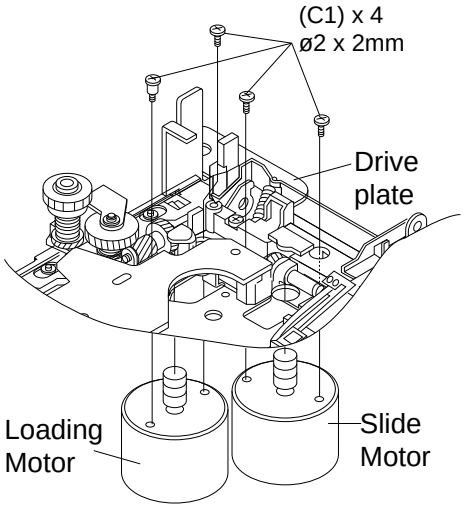


Figure 13-3

MD-ZV30H

How to remove the optical pickup (See Fig. 14-1.)

1. Remove the screw (E1) x 3 pcs.

Caution:
Take utmost care so that the magnetic head is not damaged.

2. Slightly withdraw the MD pickup guide (E2) x 1 and its shaft (E3) x 1 pc., and slowly raise the optical pickup.

Caution:
Take care so that the gear is not damaged.
(The damaged gear emits noise during searching.)
Be careful so that the plate spring fitted to the shaft at the opposite side is not deformed.

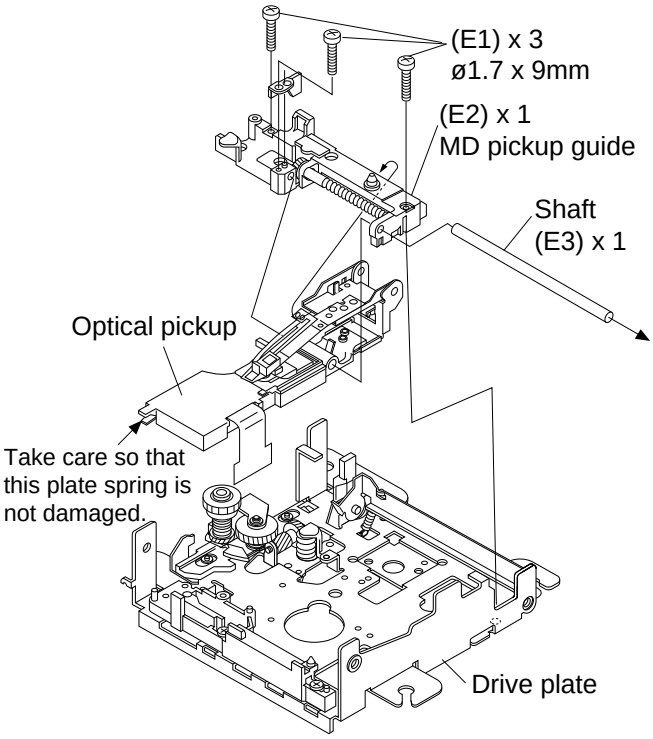


Figure 14-1

How to remove the magnetic head (See Fig. 14-2.)

1. Remove the screw (F1) x 1 pc.
2. Remove the solder joint (F2) x 2 connecting the magnetic head to the head relay flexible board.

Caution:
Take utmost care so that the magnetic head is not damaged when it is mounted.

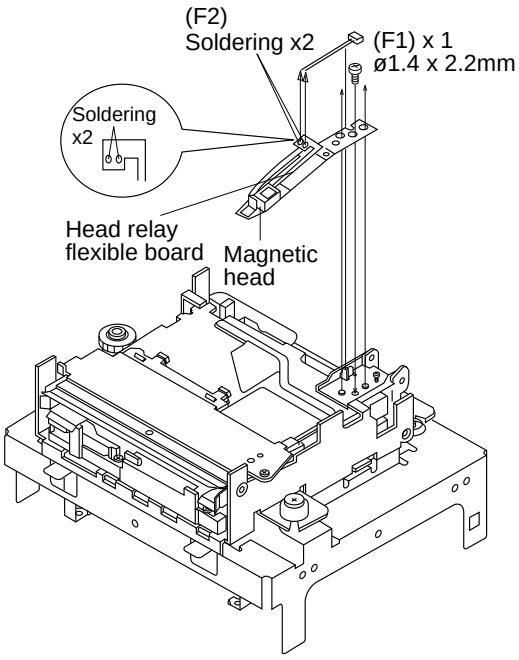


Figure 14-2

How to Replacing the loading pinch roller (See Fig. 14-3.)

1. Remove the fixing washer (G1) x 1 pc. with small precise screwdriver, and remove the loading pinch roller upward.

Caution:
The deformed or damaged fixing washer must be replaced with new one.

How to Cleaning the loading pinch roller (See Fig. 14-3.)

1. Impregnate swab with several drops of alcohol, and clean the loading pinch roller with it.
2. I Before using make sure that the cleaned parts have dried sufficiently.

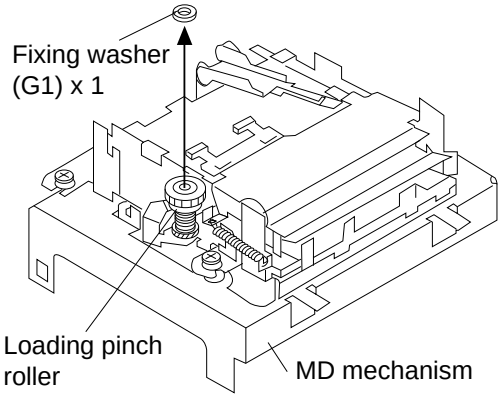


Figure 14-3

CD MECHANISM SECTION

For the procedure to remove the CD mechanism from the main unit, refer to Disassembling Procedure, Steps 1, 4, 5, 10, and 13. (p.10).

How to Remove the optical pickup (See Fig. 15-1.)

1. Remove the screws (A1)x 2 pcs., to remove shaft (A2)x 1 pc.
2. Remove stop washer (A3)x 1 pc., to remove gear (A4)x 1 pc.
3. Remove the optical pickup.

Note:
After disconnecting the optical pickup connector wrap the front end of connector in conductive aluminum foil so as to prevent damage to the optical pickup by static electricity.

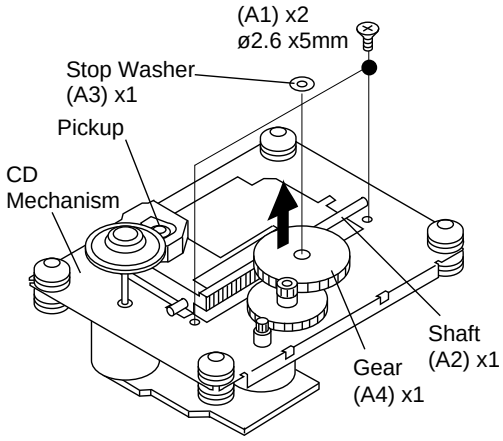


Figure 15-1

How to Remove the tray motor/main cam motor (with CD changer PWB) (See Fig. 15-2.)

1. Remove the front cabinet, and remove the CD changer from the rear cabinet. After that, disassemble as shown in the figure.
2. Remove the belts (B1)x 2 pcs., from the motor side.
3. Remove the screws (B2)x 4 pc.
4. Remove the tray motor and main cam motor.

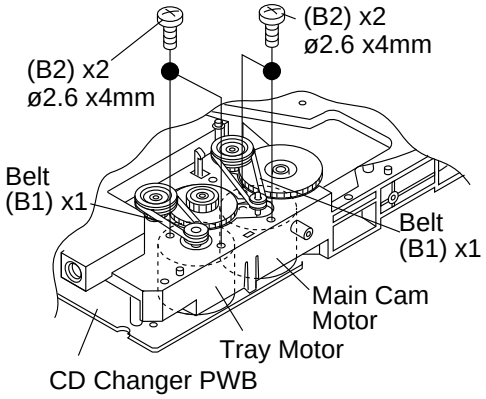
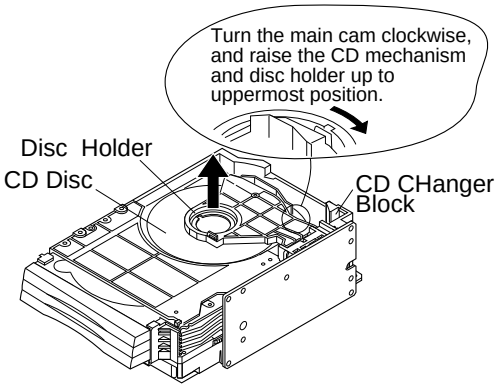


Figure 15-2

How to remove the CD disc (When CD is in playback state) (See Fig. 15-3.)

1. Remove the front cabinet.
2. Remove the CD changer from the rear cabinet.
3. Remove the CD disc as shown in the figure.

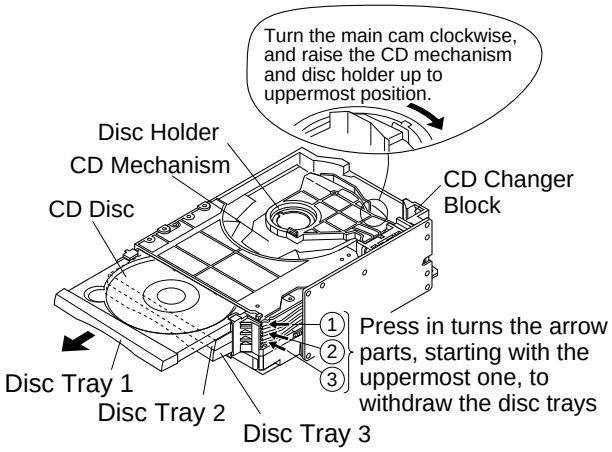


(When CD is in playback state.)

Figure 15-3

How to remove the CD disc (When CD exists in the tray) (See Fig. 15-4.)

1. Remove the front cabinet.
2. Remove the CD changer from the rear cabinet.
3. Remove the CD disc from the tray as shown in the figure.



(When CD exists in the tray.)

Figure 15-4

ADJUSTMENT

TUNER SECTION

fL: Low-range frequency
fH: High-renge frequency

• FM RF

Adjusting item	Adjustment place	Setting
Band Coverage (R9VT line voltage)	fL : L3	fL: 2.5 ± 0.1V(87.5MHz) fH: 6.3 ± 0.7V(108MHz) (fH: Only check)
Tracking	fL : L1 (82.5MHz)	Set headphone output to maximum.

Note:
Adjust the L1 coil so as to get maximum in the closing direction.

• FM IF

Adjusting item	Adjustment place	Adjusting method
IF	T1	Input : Pin 4 of IC1
Detection	L21	Output : Pin 19 of IC2

• AM IF/RF adjustment and check

Adjusting item	Adjustment place	Setting
IF	CF3	Set IF waveform 450 kHz to maximum.
Band Coverage (R9VT line voltage)	fL: T3 (522kHz) (Red core)	fL: 1.0 ± 0.1V fH: 5.9 ± 0.9V (Only check)
Tracking	fL: T2 (999kHz) (Black core)	Set headphone terminal output to maximum.

System Microcomputer TUNER TEST mode
For reference

When the TUNER TEST mode has been set, frequency can be set in the memory as an initial setting as shown in the table 16. Therefore it can be called by using the DIRECT button of remote controller to use it for adjustment and checking of tuner circuit.

1. TUNER TEST mode
   Pressing both TUNER button and TRACK button, press RESET switch.
2. Stations is preseted as below.

Memory	FM	Memory	AM
1	87.5MHz	6	522kHz
2	108.0MHz	7	1,620kHz
3	90.0MHz	8	603kHz
4	106.0MHz	9	1,404kHz
5	98.0MHz	10	990kHz

Table 16 Memory initial setting

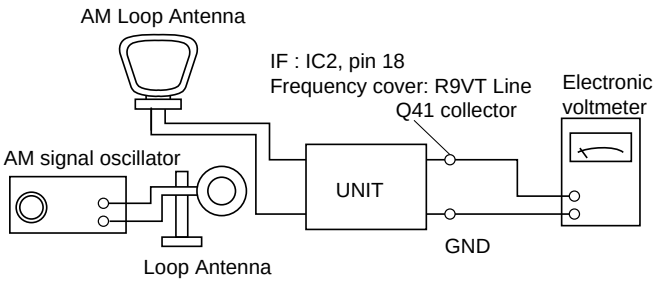


Figure 16-1 AM IF

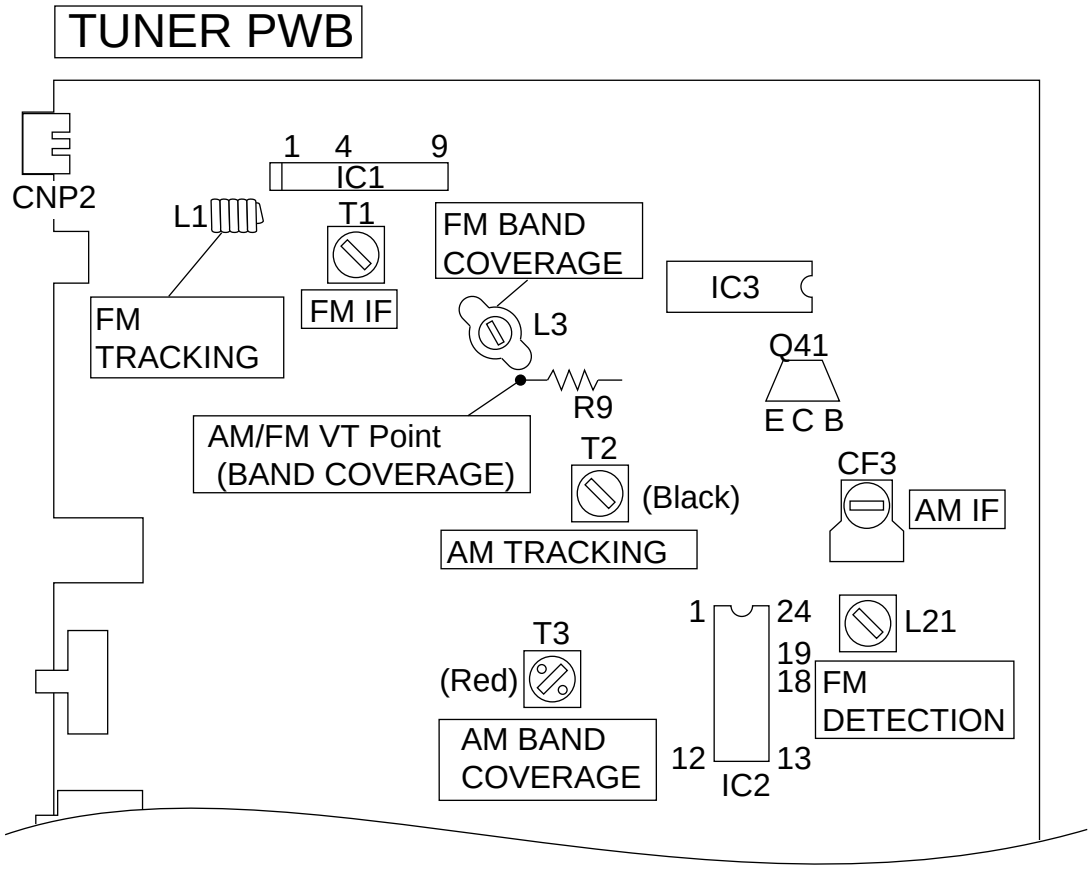


Figure 16-2 ADJUSTMENT POINTS

CD SECTION

Extension cable

When making adjustment or checking operation, use the following extension cable as necessary.

Type	Extension cable	Parts No.	Price Code
A	For CD PWB (TP751, 6-pin)	QCNWK0043AFZZ	AG

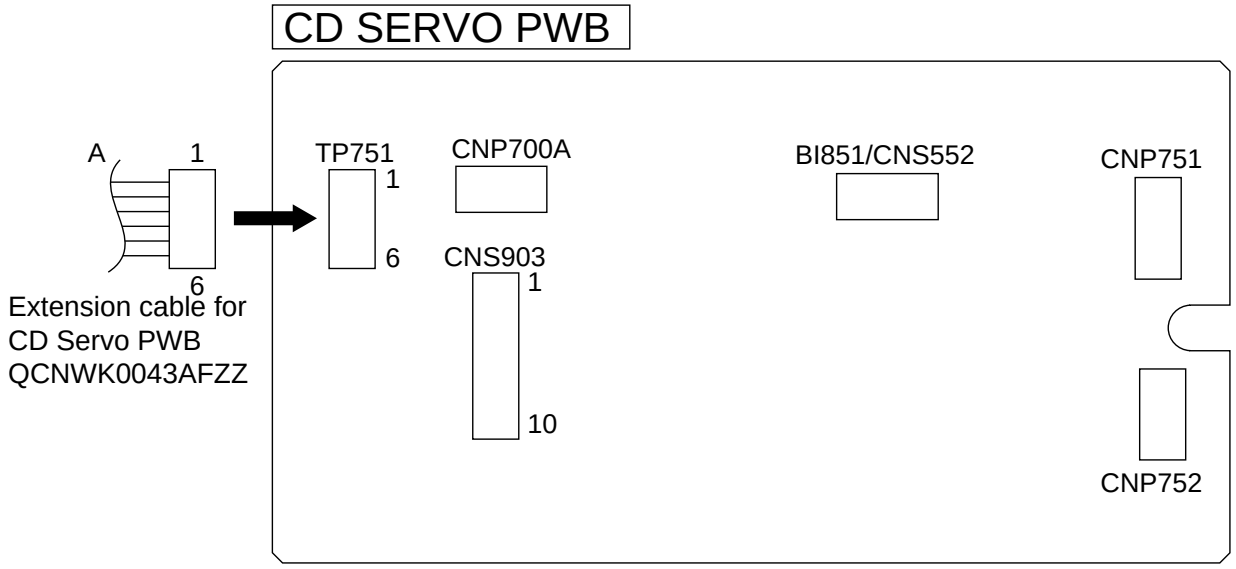


Figure 17-1

CD circuit adjustment

1. Preparation for adjustment

Setting the CD TEST mode

Test mode	Setting procedure	Remarks	Indication
CD test mode 0	Holding down the CD►► MD digital editing START button and the CD►II button at the same time, plug the AC code into the AC socket (or press the RESET switch). (TEST waiting)	Without IL	CD TEST0
CD test mode 1	IPress the [CD-PLAY] button.	Laser ON	CD TEST1 CD test mode 1
CD test mode 2	Press the [CD-PLAY] button. (2nd time)	Focus servo ON	CD TEST2 CD test mode 2
CD test mode 3	Press the [CD-PLAY] button. (3rd time)	When the spin servo is on, the disc motor rotates.	CD TEST3 CD test mode 3
CD test mode 4	Press the [CD-PLAY] button. (4th time)	Tracking servo ON	CD TEST4 CD test mode 4
CD test mode 5	Press the [CD-PLAY] button. (5th time)	Track No. and time are indicated.	CD TEST5 CD test mode 5

Button operation in CD test mode

1. [STOP] : Specific operation is stopped, resulting in TEST mode waiting state. The pickup slide is kept in stop state.
2. [►►] : The pickup slides toward the external periphery.
3. [◄◄] : The pickup slides toward the internal periphery. When the switch (Pu_IN) is on, the slide is stopped.
4. [DISP] : When this switch is pressed in TEST 4 or later, it is accepted, and the mode is changed directly to TEST 3. (Tracking servo OFF)

6.Hold down [CD-PLAY] for 500 msec : This button is accepted in the TEST waiting state, and mode is changed directly to TEST 5.

Caution

1.Even when the sub-code cannot be read during playing, the [STOP] button must be accepted to perform the STOP operation.
2.When the [CD-EJECT] button is pressed, the tray must be opened after normal STOP operation.

2. Adjusting the servo unit

Set all the half-fixed resistors in the mechanical center position.

Adjustment classification	Adjusting object	Setting/adjusting procedure	Connection of measuring instrument
Set the CD test mode 0, and shift the pickup to the center.			
Set the CD test mode 1. (Make sure that laser lights.)			
After loading the disc set the test mode 2. (Make sure that the focus servo is on. The disc does not rotate but mechanical tone is heard.)			
Set the CD test mode 3. (The spin servo is turned on, and the disc turns.)			
Tracking error balance adjustment	VR751	*1 (Figure 19-1)	Pin 6 (1/2Vcc) and pin 4 (TG1) of TP751
Set the CD test mode 4. (Tracking servo ON)			
Tracking gain adjustment	VR752	Get the same waveform on CH1 and CH2. *2	Pin 4 (TG1), pin 2 (TG2) and pin 6 (1/2Vcc) of TP751 (Relay circuit is used)
Set the test mode 5, and make sure that track No. and time are indicated.			
Apply a black tape to the disc, and play back this part. (Figure 19-2). (It is allowed to apply any mode in addition to test mode.)			
Focus offset adjustment	VR753	*3	Pin 6 (1/2Vcc) and pin 1 (FG1) of TP751 *4
Tracking offset adjustment	VR754	*5	Pin 6 (1/2Vcc) and pin 4 (TG1) of TP751 *6

*1: Taking 1/2Vcc as a reference DC level, make an adjustment to get vertical symmetry of waveform (Figure 19-1) with respect to the reference DC level.
(Amplitude 0.5 to 1.5 Vp-p) (As the optical pickup has been adjusted before shipping, adjustment is required only when adjustment disturbance is found.)
*2: Input oscillation frequency 1.5 kHz, 300 mVrms
*3: Make an adjustment so that the error waveform is minimized (Figure 19-3), noise (track jump sound) ceases during audio output monitoring and clear playback is ensured.
*4: The proper measurement range of oscilloscope is 50 mV, 0.5 ms.
Connect the trigger to the pin 39 (HFD) of IC750, apply coupling on DC (-) slope, and observe waveform in the normal trigger mode.
*5: Make an adjustment so that the error waveform becomes uniform and is minimized (Figure 19-3), noise (track jump sound) ceases during audio output monitoring, clear playback is ensured and sound skip and pause state do not occur.
*6: The proper measurement range of oscilloscope is 0.1V, 0.5 ms. The trigger is the same as stated in the note*4 above.
Reference: If the error waveform contains significant noise and is not clear, observe the waveform, using the low-pass filter (Figure 19-4).

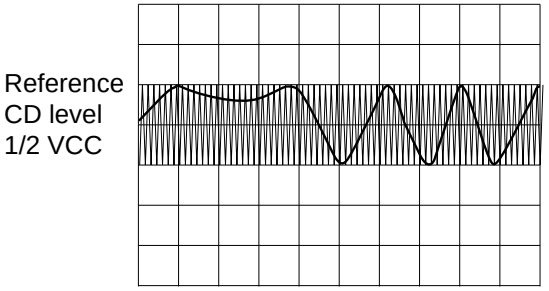


Figure 19-1 TRACKING ERROR BALANCE

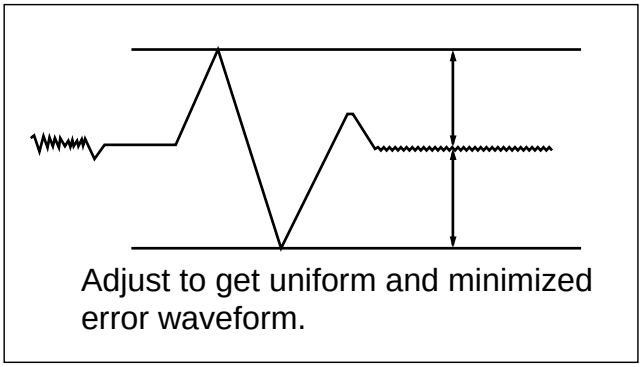
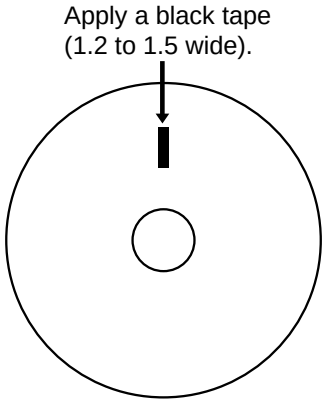


Figure 19-3 FOCUS OFFSET/TRACKING OFFSET



It is allowed use any disc in addition to test disc.
Do not apply the black tape to the initialization part (TOC).

Figure 19-2 FOCUS OFFSET/TRACKING OFFSET

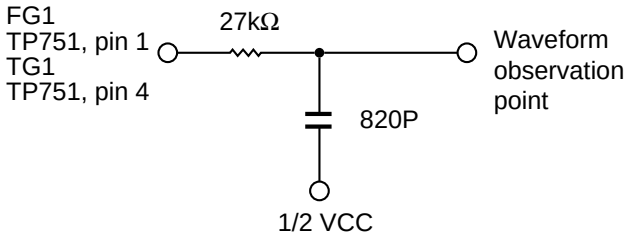


Figure 19-4 LOW-PASS FILTER

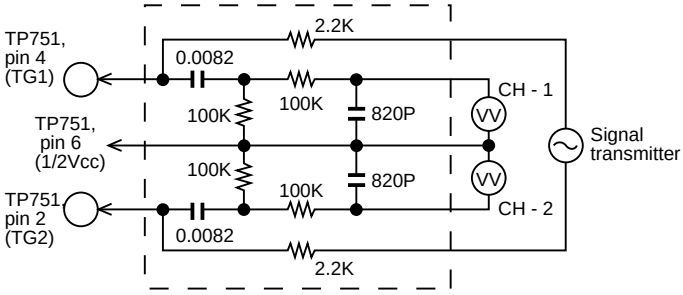


Figure 19-5 TRACKING GAIN RELAY CIRCUIT

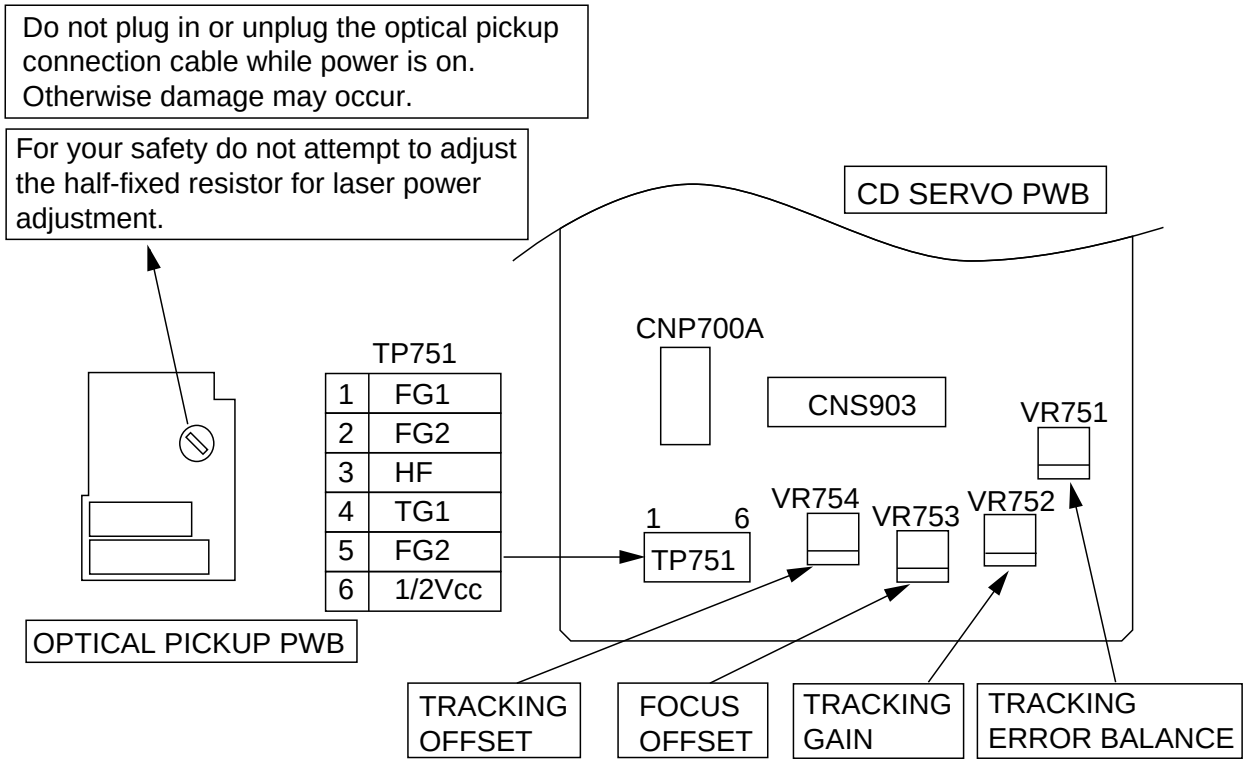


Figure 19-6 ADJUSTMENT POINTS

MD-ZV30H

MD SECTION

1. Preparation for ajustment

Test disc

	Type	Test disc	Parts No.	Price Code
1	High reflection disc	TGYS1 (SONY)	RRCDT0101AFZZ	CB
2	Low reflection disc	Recording minidisc	UDSKM0001AFZZ	AZ
3	————————	Head adjusting transparent disc	RRCDT0103AFZZ	BK

Extension cable (See Fig. 29-3)

	Type	Parts No.	Price Code
1	Extension PWB for Servicing	RUNTK0385AFZZ	BS
2	Extension Connector (2 Pin)	QCNWK0059AFZZ	AF
3	Extension Cable (26 Pin)	QCNWK0038AFZZ	AF
4	Extension Connecter (5 Pin)	QCNWK0060AFZZ	AH
5	Extension Cable (5 Pin)	QCNWK0061AFZZ	AK
6	Extension Cable (24 Pin)	QCNWK0035AFZZ	AN

2. Test mode

Test mode setting

1. Holding down the NAME/TOC EDIT button and MD ▶II (PLAY/PAUSE) button, plug in the AC cable.
(The state A is changed to the state B.)
2. Load the playback disc 1 (high reflection disc) or the record disc 2 (low reflection disc).
(The state C is set.)

Thereby the test mode has been set.

A: tsm ○○○○ e○○: TEST mode : MD TEST STOP state represents the version of MD microcomputer.
MD TEST
↓
B: EJECT
MD TEST

B: AUTO ↓
MD TEST

(When the MD ■ button is pressed in the state B, the display of A is resumed. To resume again the state B, press the CD ▶II (PLAY/PAUSE) button.)

Entering the specific modes

Whenever the ▶II (PLAY/PAUSE) button is pressed while the display is in the AUTO state, the mode is changed as follows.

→ AUTO → RESULT → MANUAL → EEPROM_SET →

• Test mode canceling procedure

• Press twice the POWER button. Then, the set exits the TEST mode, and it is set to POWER OFF state.

• Test Mode

1. AUTO Mode	• Automatic adjustment is performed. (After adjustment the grating adjustment mode is set.) • Set value is output through the display interface. • Continuous playback is performed (error rate display).
2. RESULT Mode	• The setting is displayed. • Set value is changed manually (in servo OFF state).
3. MANUAL Mode	• Temperature is displayed. • Seeing the displayed measurement value/set value, make manualadjustment to set values within the allowable range. • Continuous playback is performed (error rate jump test).
4. EEPROM setting mode	• Change manually various factors of digital servo. • Turn on each servo individually. • Measure the temperature detecting terminal voltage, and set the reference value.
5. INNER Mode	• Determine the position where the INNER switch is turned on.(only high reflection disc.)
6. TEST/PLAY Mode	• Continuous playback from the specified address is performed. • C1 error rate measurement
7. TEST/REC Mode	• Continuous record from the specified address is performed. • Change of record laser output
8. EJECT mode	• TEMP setting of EEPROM setting • CONTROL setting of EEPROM setting • Laser power setting

1. AUTO Mode

Step No.	Setting Method	Remarks	Display
Step 1	Test mode STOP state		[tsm○○○○ e○○]
Step 2	Once press the CD play button.	AUTO menu mode	[A U T O]
Step 3	Once press the MD Play button.	Slide shift to innermost periphery and start of automatic adjustment • When the high reflection disc is used, ✳✳✳ changes as follows TEO→► FEO→► Hfg→► HTG→► HTB→► HFG • When the low reflection disc is used, ✳✳✳ changes as follows TEO→► FEO→► Lfg→► LTG→► LTB→► LFG→► GTL→►GTG→► GTB→►LFG	[✳✳✳ : ○○ ●●]
Step 4	If adjustment is OK, the process proceeds to Step 5. If adjustment is NG, the process proceeds to Step 10.		
Step 5	End of adjustment		[C O M P L E T E]
Step 6-1	Press the MD PLAY button.	Proceeds to Step 7.	
Step 6-2	Press the MD Stop button.	Returns to the AUTO MENU mode.	[A U T O]
Step 7	Continuous playback (pit section) Continuous playback (groove section)	(High reflection disc) (Low reflection disc)	[s□□□□ c△△△△] [a□□□□ c△△△△]
Step 8	Once press the CD Stop button.	(Low reflection disc)	[a□□□□ a▲▲▲▲]
Step 9	Once press the MD STOP button.	Returns to the AUTO MENU mode.	[A U T O]
Step 10	Adjustment status output	• Adjustment NG: When TEO or FEO measured value is out of range, adjustment is disabled or focus ON is disabled.	[C a n' t A D J .]
Step 11	Once press the MD Stop button.	Returns to the AUTO MENU mode.	[A U T O]

• ✳✳✳: Adjustment name, ○○: Measurement name, ●●: Set value, □□□□: Address, △△△△: C1 Error, ▲▲▲▲: ADIP Error

2. RESULT Mode

Step No.	Setting Method	Remarks	Display
Step 1	Test mode CD Play state		[tsm○○○○e ○○]
Step 2	Press the MD Play button twice.	RESULT menu mode	[R E S U L T]
Step 3	Press the CD Play button.	Measured value display: Tracking error offset	[T E O : ○○]
Step 4	Press the CD Play button.	Measured value display: Focus error offset	[F E O : ○○]
Step 5	Press the CD Play button.	Measured value display: High reflection focus gain	[H F G : ●●]
Step 6	Press the CD Play button.	Measured value display: High reflection pit tracking gain	[H T G : ●●]
Step 7	Press the CD Play button.	Measured value display: High reflection pit tracking error balance	[H T B : ●●]
Step 8	Press the CD Play button.	Measured value display: Low reflection focus gain	[L F G : ●●]
Step 9	Press the CD Play button.	Measured value display: Low reflection pit tracking gain	[L T G : ●●]
Step 10	Press the CD Play button.	Measured value display: Low reflection pit tracking error balance	[L T B : ●●]
Step 11	Press the CD Play button.	Measured value display: Low reflection TOTAL signal level	[G T L : ●●]
Step 12	Press the CD Play button.	Measured value display: Low reflection groove tracking gain	[G T G : ●●]
Step 13	Press the CD Play button.	Measured value display: Low reflection groove tracking error balance	[G T B : ●●]
Step 14	Press the MD Stop button.	RESULT menu mode	[R E S U L T]

• ○○ : Measurement name, ●●: Set value
• When the REC button is pressed, the step advances reversely.
• When the VOL UP button is pressed while the setting is displayed, the setting increases, and the new setting is stored in RAM.
When the VOL DOWN button is pressed while the setting is displayed, the setting decreases, and the new setting is stored in RAM.
• When the VOL UP/DOWN button is held down, the setting changes continuously with 100 ms cycle.

3. MAMUAL Mode

Step No.	Setting Method	Remarks	Display
Step 1	Test mode STOP state		[tsm○○○○e ○○]
Step 2	Press the CD Play button three times.	MAMUAL menu mode	[M A N U A L]
Step 3	Press the MD Play button.	Measured value: Temperature	[T M P: ◆◆]
Step 4	Press the CD Play button.	Tracking error offset measurement	[T E O : ○○]
Step 5	Press the CD Play button.	Focus error offset measurement	[F E O : ○○]
Step 6	Press the CD Play button.	Laser lighting	[L O N :]
Step 7	Press the CD Play button.	Slide shift to innermost periphery (6-a) Focus gain rough adjustment (high reflection) (6-b) Focus gain rough adjustment (low reflection)	 [H f g : ○○ ●●] [L f g : ○○ ●●]
Step 8	Press the CD Play button.	(7-a) Pit: Tracking gain adjustment (high reflection) (7-b) Pit: Tracking gain adjustment (low reflection)	[H T G : ○○ ●●] [L T G : ○○ ●●]
Step 9	Press the CD Play button.	(8-a) Pit: Tracking error balance adjustment (high reflection) (8-b) Pit: Tracking error balance adjustment (low reflection)	[H T B : ○○ ●●] [L T B : ○○ ●●]
Step 10	Press the CD Play button.	(9-a) Focus gain fine adjustment (high reflection) (9-b) Focus gain fine adjustment (low reflection)	[H F G : ○○ ●●] [L F G : ○○ ●●]
Step 11	Step (14) when the CD Play button is pressed. Step (12) when the MD Play button is pressed.	(High reflection disc is not accepted.)	
Step 12	Pit section continuous playback		[s□□□□ c△△△△]
Step 13	Step (9-a) or (9-b) when the MD Record button is pressed.		
Step 14	TOTAL signal level adjustment	Steps 14 to 19 are only for low reflection.	[G T L : ○○ ●●]
Step 15	Press the CD PLay button.	Groove: Tracking gain adjustment	[G T G : ○○ ●●]
Step 16	Press the CD Play button.	Groove: Tracking error balance adjustment	[G T B : ○○ ●●]
Step 17	Press the CD Play button.	Focus gain fine adjustment	[L F G : ○○ ●●]
Step 18	Press the MD Play button.	Groove section continuous playback	[a□□□□ c△△△△]
Step 19	Press the CD STOP button.		[a□□□□a▲▲▲▲]
Step 20	Press the MD STOP button.	Returns to the MANUAL MENU mode.	[M A N U A L]

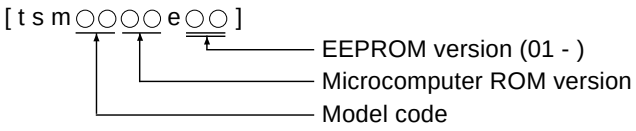
• ○○ : Measurement name, ●●: Set value, □□: Address, △△C1 Error, ◆◆ Temperature Cord, ▲▲▲▲ ADIP Error
• Pressing the REC button results in reversing.
• When the VOL UP button is pressed while adjustment is made, the setting increases, and the new setting is output.
• When the VOL DOWN button is pressed while adjustment is made, the setting decreases, and the new setting is output.
• When the VOL UP/DOWN button is held down, the setting changes continuously with 100 ms cycle.
• When the TRACK button is pressed during continuous playback, the JUMP mode is changed, and an indication appears for one second.
[1 T R_J U M P] → [10 T R_J U M P] → [400 T R_J U M P] → [1 T R_J U M P]

4. EEPROM setting mode

EEPROM (IC1402) writing procedure

1. Procedure to replace EEPROM and to write microcomputer initial value in EEPROM

(1) Replace EEPROM.
(2) Refer to the latest "EEPROM DATA LIST".
(3) Holding down the "NAME/TOC EDIT" button and "MD PLAY" button, plug the AC cord into the AC socket to start the TEST mode.
(4) IVersion indication



(5) Press the [CD PLAY] button 4 times.
[E E P R O M S E T]
(6) Perform the "EEPROM SETTING MODE FLOW CHART" indicting operation, compare the indication with the "EEPROM DATA LIST", and set according to the "EEPROM DATA LIST" with the "VOL UP" and "VOL DOWN" buttons.
(7) Set the temperature reference value. (Refer to "Temperature reference setting method".)
(8) All the settings must conform to the "EEPROM DATA LIST".
(9) Write data in EEPROM by turning off power supply.

2. Temperature reference setting method (to be performed at room temperature 21 to 29°C)

(1) TEST mode STOP state
[t s m ○○○○ e ○○]
(2) Correct temperature according to the following table depending on environmental temperature.

Environmental temperature(°C)	Temperature correction
21 ~ 22.3	- 01H
22.3< ≤ 26.3	± 0
26.3< ≤ 29	+ 01H

An example: When environmental temperature is 22°C and measured temperature is 73H
Temperature setting = 73 H - 01 H
= 72 H
* When measured temperature fluctuated between two values, take lower one (take 72H if 73H and 72H appear).
(3) Press the [CD PLAY] button 4 times.
[E E P R O M S E T]
(4) Press once the [MD PLAY] button, and press the [CD PLAY] button 4 times.
[T e m p]
(5) Press the [MD PLAY] button.
[T E M P ○○ ◆◆] ○○: Measured temperature ◆◆: Temperature setting
(6) Set temperature to the value obtained above by using the "VOL UP" and "VOL DOWN" buttons.
(7) Press twice the "STOP" button.
[E E P R O M S E T]

● EEPROM DATA LIST

After "EEPROM SET"
[MD PLAY] focus setting

	Item indication	Setting
[MD PLAY]	F G ○○	98H
[CD PLAY]	F F 1 ○○	70H
[CD PLAY]	F F 2 ○○	F0H
[CD PLAY]	F F 3 ○○	FEH
[CD PLAY]	F F 4 ○○	00H
[CD PLAY]	F Z C L E V ○○	13H
[CD PLAY]	F O K L E V n ○○	F6H
[CD PLAY]	F O K L E V f ○○	7FH
[CD PLAY]	F O K L P F n ○○	00H
[CD PLAY]	F O K L P F f ○○	88H
[CD PLAY]	W A I T f ○○	3AH

After focus setting
[CD PLAY] spin setting

	Item indication	Setting
[MD PLAY]	S P G ○○	18H
[CD PLAY]	S P G — i n ○○	88H
[CD PLAY]	S P G — m i d ○○	66H
[CD PLAY]	S P G — o u t ○○	47H
[CD PLAY]	S P 1 ○○	10H
[CD PLAY]	S P 2 ○○	87H
[CD PLAY]	S P 3 ○○	E9H
[CD PLAY]	S P 4 ○○	EAH
[CD PLAY]	S P 5 ○○	10H

After slide setting
[CD PLAY] TEMP setting

	Item indication	Setting
[MD PLAY]	T E M P ○○	73H

After spin setting
[CD PLAY] tracking setting

	Item indication	Setting
[MD PLAY]	T G ○○	45H
[CD PLAY]	T F 1 ○○	95H
[CD PLAY]	T F 2 ○○	EØH
[CD PLAY]	T R B L V o ○○	40H
[CD PLAY]	T R B L V t ○○	60H
[CD PLAY]	T R K L V o ○○	48H
[CD PLAY]	T R K L V t ○○	28H
[CD PLAY]	T D P W o ○○	75H
[CD PLAY]	T D P W t ○○	1AH
[CD PLAY]	S L C T o ○○	00H
[CD PLAY]	S L C T t ○○	40H
[CD PLAY]	S L C T m ○○	53H
[CD PLAY]	C O T L V H p ○○	14H
[CD PLAY]	C O T L V L p ○○	ECH
[CD PLAY]	C O T L V H r ○○	28H
[CD PLAY]	C O T L V L r ○○	D8H
[CD PLAY]	W A I T m ○○	90H

After tracking setting
[CD PLAY] slide setting

	Item indication	Setting
[MD PLAY]	S L G ○○	35H
[CD PLAY]	S L 2 ○○	27H
[CD PLAY]	S L D L E V ○○	ØAH
[CD PLAY]	S L K L V k ○○	78H
[CD PLAY]	S L K L V t ○○	50H
[CD PLAY]	S L K L V m ○○	78H

After TEMP setting
[CD PLAY] control setting

	Item indication	Setting
[MD PLAY]	C O N T R L 1 ○○	8ØH
[CD PLAY]	C O N T R L 2 ○○	Ø3H

EEPROM SETTING MODE FLOW CHART

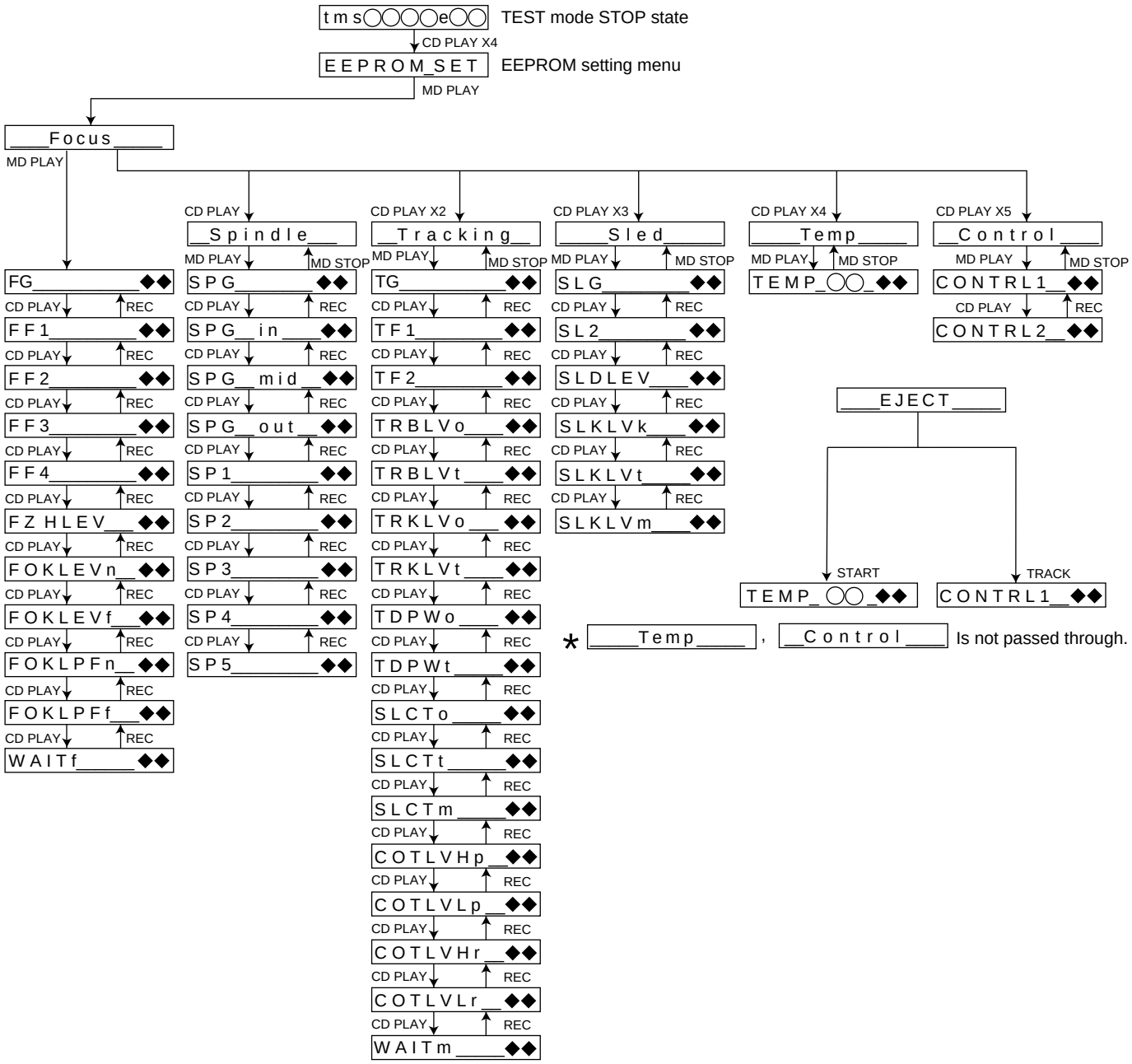


Figure 25

5. INNER Mode

Step No.	Setting Method	Remarks	Display
Step 1	Test mode STOP state		[tsm○○○○e○○]
Step 2	Press the TRACK button.	INNER menu	[I N N E R]
Step 3	Press the MD Play button.	Measurement of INNER switch position	[s□□□□c △△△△]
Step 4	Press the MD Stop button.	Returns to the INNER menu.	[I N N E R]

• □□□□: Address, △△△△: C1 ERROR
• When the Stop button of the INNER menu is pressed, the TEST mode is stopped.

6. TEST/PLAY Mode

Step No.	Setting Method	Remarks	Display
Step 1	Test mode STOP state		[tsm○○○○e○○]
Step 2	Press the START button.	TEST/PLAY menu	[T E S T P L A Y]
Step 3	Press the CD Stop button.	Address setting (target address value is displayed).	[A D R E S 0 0 3 2]
Step 4	Press the MD Play button.	Continuous playback from address set value (pit section) (high reflection disc) Continuous playback from address set value (groove section) (low reflection disc)	[s□□□□c△△△△] [a□□□□c△△△△]
Step 5	Press the CD STOP button.	(Low reflection disc)	[a□□□□c▲▲▲▲]
Step 6	Press the MD Stop button.	Return to TEST PLAY	[T E S T _ P L A Y]

• □□□□: Address, △△△△: C1 Error, ▲▲▲▲ : ADIP Error
• When the MD STOP button is pressed while the TEST-PLAY menu appears, the TEST mode STOP state is set.
• AWhen the MD PLAY button is pressed while the TEST-PLAY menu appears, continuous playback is started from the current pickup position.
Whenever the START button is pressed during address setting, the address changes as follows.
0032 → 03C0 → 0700 → 0032 → • • •
• The SKIPUP/DOWN button is used for address setting.
• Whenever the CD STOP button is pressed during address setting, the digit to be changed by SKIPUP/DOWN changes as follows.
0032 → 0032 → 0032 → 0032 → • • •
*SKIP UP: Digit of address specified above is set to "+1H" (0 to F, with carry, SKIPUP: ?? button)
* SKIP DOWN: Digit of address specified above is set to "-1H" (0 to F, with carry-down, SKIP DOWN: ?? button)
* When the SKIPUP/DOWN button is held down, setting changes continuously with one cycle being 100 ms.
• When the TRACK button is pressed in the continuous playback mode, the number of jump lines changes as follows.
1 line → 10 lines → 400 lines → 1 line → • • •
* The address indication is resumed after the number of jump lines is indicated for one second. [▲▲▲ TR_JUMP]
• When the SKIP UP button is pressed in the continuous playback mode, the the specified number of lines is jumped in the FWD direction.
• When the SKIP DOWN button is pressed in the continuous playback mode, thespecified number of lines is jumped in the REV direction.

7. TEST/REC Mode

Step No.	Setting Method	Remarks	Display
Step 1	Test mode STOP state	Load the low reflection disc. (Release the erase preventing knob in advance.)	[tsm○○○○e○○]
Step 2	Press the START button twice.	TEST/REC menu	[T E S T R E C]
Step 3	Press the CD Stop button.	Address setting (target address value is displayed).	[a 0 0 3 2 P W▽▽]
Step 4	Press the MD Play button.	Continuous record	[a□□□□ P W▽▽]
Step 5	Press the MD Stop button.	Returns to the TEST REC menu.	[T E S T R E C]

• □□□□: Address, ▽▽: Setting
• When the MD STOP button is pressed while the TEST_REC menu appears, the state is changed to TEST mode STOP state.
• When the MD PLAY button is pressed while the TEST_REC menu appears, continuous recording is started from the current pickup position.
• Whenever the START button is pressed during address setting, address changes as follows.
0032 → 03C0 → 0700 → 0850 → 0032 → • • •
• The SKIP UP/DOWN button is used for address setting.
• Whenever the CD STOP button is pressed during address setting, digit to be changed by SKIP UP/DOWN changes as follows.
0032 → 0032 → 0032 → 0032 → • • •
* SKIP UP: Digit of address specified above is set to "+1H" (0 to F, with carry, SKIP UP: ►► button)
* SKIP DOWN: Digit of address specified above is set to "-1H" (0 to F, with carry-down, SKIP DOWN: ◄◄ button)
* When the SKIP UP/DOWN button is held down, setting changes continuously, one cycle being 100 ms.
• When the VOL UP/DOWN button is pressed in the address setting mode or continuous recording mode, laser record power changes.

8. EJECT Mode

Step No.	Setting Method	Remarks	Display
Step 1	Test mode EJECT state		[E J E C T]
Step 2-1	Press the CD STOP button.	Record power output state	[r p w]
Step 3	Press the CD STOP button.	Playback power output state	[r p w]
Step 2-2	Press the START button.	TEMP setting of EEPROM setting	[T E M P ○○ ◆◆]
Step 2-3	Press the TRACK button.	CONTROL setting of EEPROM setting	[CONTROL1 ◆◆]

• ◆◆: Specific setting, ○○ : Measured value

● Lead-in switch position measurement mode (Test Disc 1 is used)

Measurement with high reflection disc (check when the mechanism switch was replaced)

Step No.	Setting Method	Remarks	Display	
			Disc for record	Disc for playback
Step 1	Test mode start	Servo OFF (Power ON)	AUTO	AUTO
Step 2	Once press the TRACK button.		Operation is disabled if disc for record is in serted.	INNER
Step 3	Once press the MD Play/ Pause button.	The sub-code cluster value of Read-in switch position is displayed.		S5FF85~FFD2C ○○○○

Note : Adjust the lead-in switch position at 5FF85 to FFD2.

1. Loosen the three screws (A) fixing the mechanism switch PWB.
2. Pressing the mechanism switch PWB in the arrow direction, retighten the screw. Then, measure again the position of lead-in switch.
   After position adjustment fix the mechanism switch PWB with the three screws (A). (See Figure 27-1.)

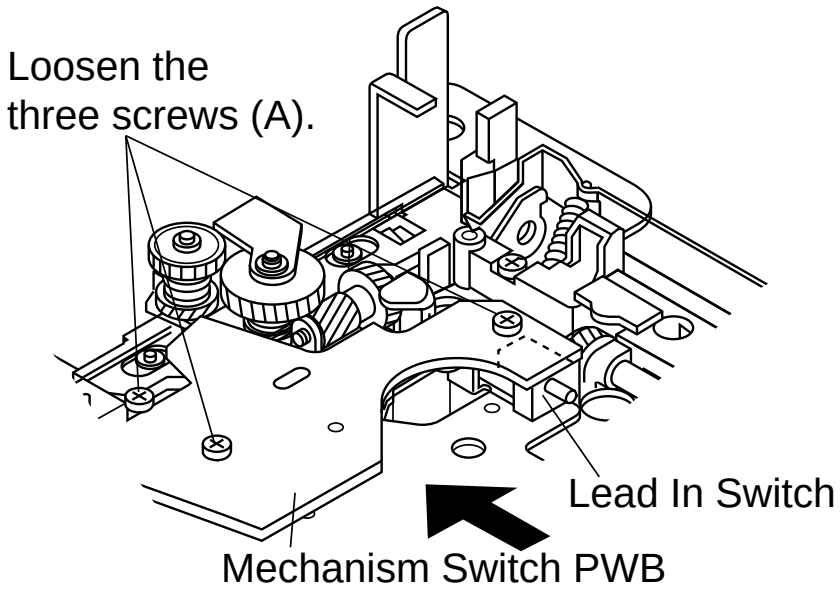


Figure 27-1

● Forced rotation of loading motor

While the display indication is in AUTO and EJECT state, the loading motor can be forcibly rotated by turning the Jog dial.

● Adjustment of magnetic head mounting position

- When the magnetic head and optical pickup have been replaced, be sure to adjust the mounting position.
- For easier adjustment of mounting position move the optical pickup to the center position, and then adjust the position.

1. Set the adjusting transparent disc 3.
2. Lower the magnetic head up-shift arm with your finger, and raise the magnetic head.
3. Viewing the set from above, make an adjustment so that the magnetic head aligns with the optical pickup objective lens.
   - •Radial direction: Slightly loosen the head fixing screw (A), and shift the magnetic head fitting to align the head with the pickup abjective lens.
   - •Circumferential direction: Turn the magnetic head circumferential adjustment nut (B), and adjust to align the head with the objective lens.
4. Make sure that there is a clearance as shown in Figure 28-1 and the magnetic head moves up and down smoothly.
5. After adjustment apply Screw Lock to the head fixing screw (A) and adjusted magnetic head circumferential adjusting screw (B).

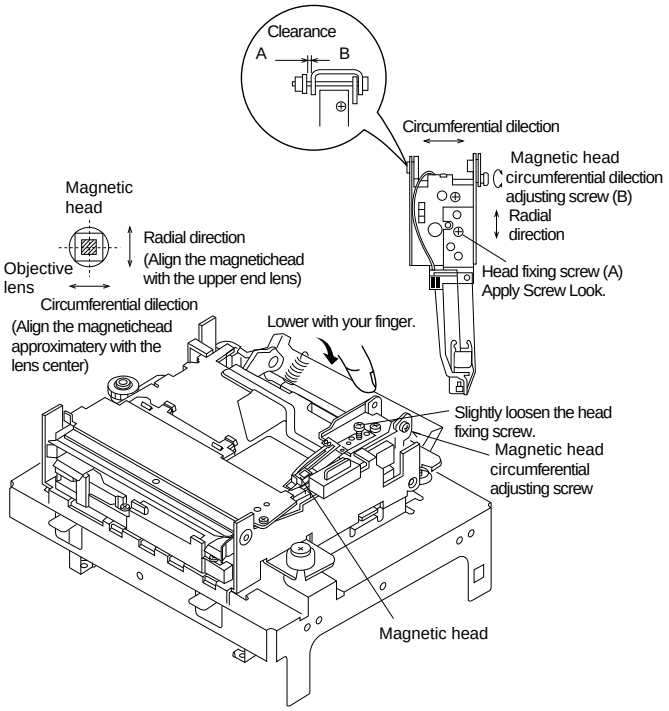

Clearance
A
B
Circumferential dilection
Magnetic head circumferential dilection adjusting screw (B)
Radial direction
Magnetic head
Radial direction (Align the magnetichead with the upper end lens)
Objective lens
Circumferential dilection (Align the magnetichead approximatery with the lens center)
Head fixing screw (A) Apply Screw Look.
Lower with your finger.
Slightly loosen the head fixing screw.
Magnetic head circumferential adjusting screw
Magnetic head

Figure 28-1

● Mechanism Adjustment

1. Optical pickup grating inspecting method

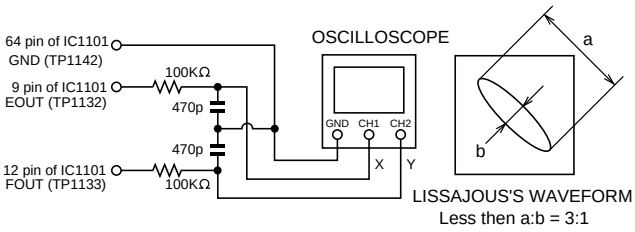


Figure 28-2 OPTICAL PICKUP GRATING DEVIATION MEASURING METHOD

After the automatic adjustment is performed in the AUTO mode (test mode) with the aid of high refection MD disc ("COMPLATE" is displayed), the Lissajous's waveform (x-y) is adjusted.

1. Slightly loosen the 3 screws of spin motor, and make an adjustment, observing the Lissajous's wavefor.
2. After adjustment tighten the screws in arder of ① , ② , ③

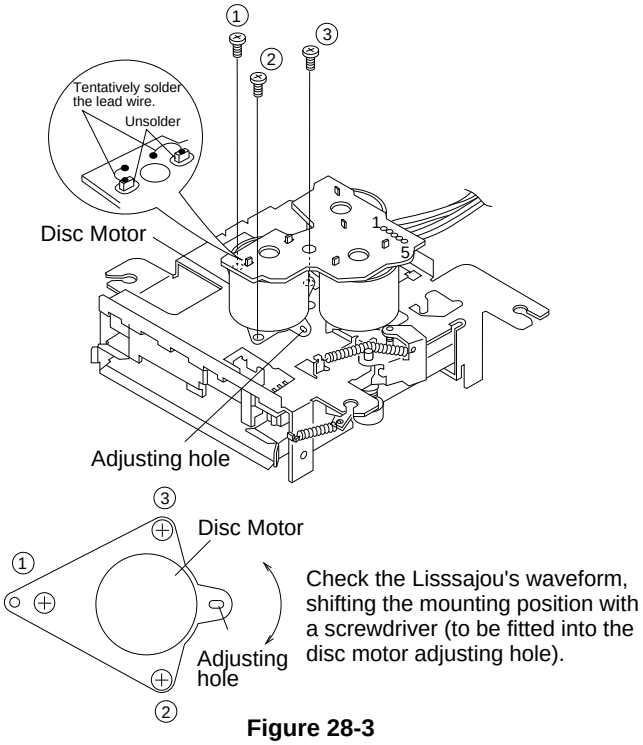

Tentatively solder the lead wire.
Unsolder
Disc Motor
Adjusting hole
Disc Motor
Adjusting hole
Check the Lisssajou's waveform, shifting the mounting position with a screwdriver (to be fitted into the disc motor adjusting hole).

Figure 28-3

2. Jitter adjustment and checking method

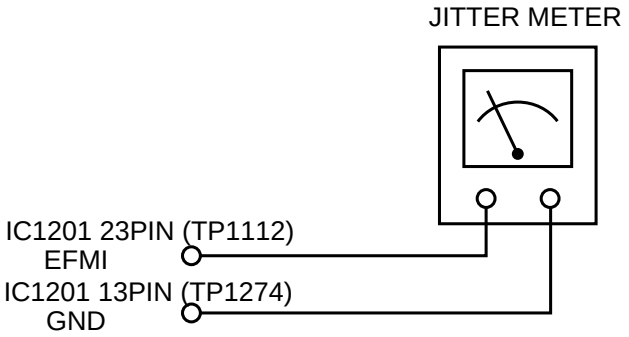


Figure 29-1

After performing the automatic adjustment in AUTO mode of test mode, using the low reflection MD disc set the jitter to the best point by adjusting the FB (focus balance) VR1110 on the main PWB. At this time jitter must be 32 ns or less.

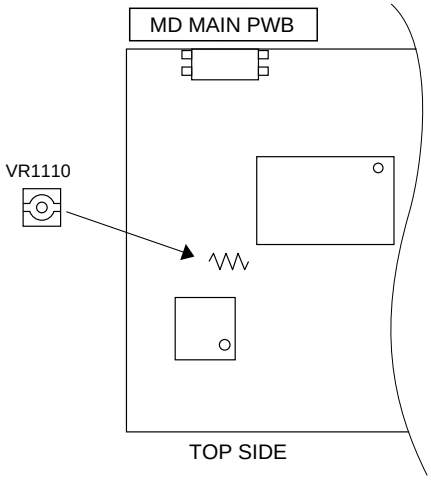


Figure 29-2

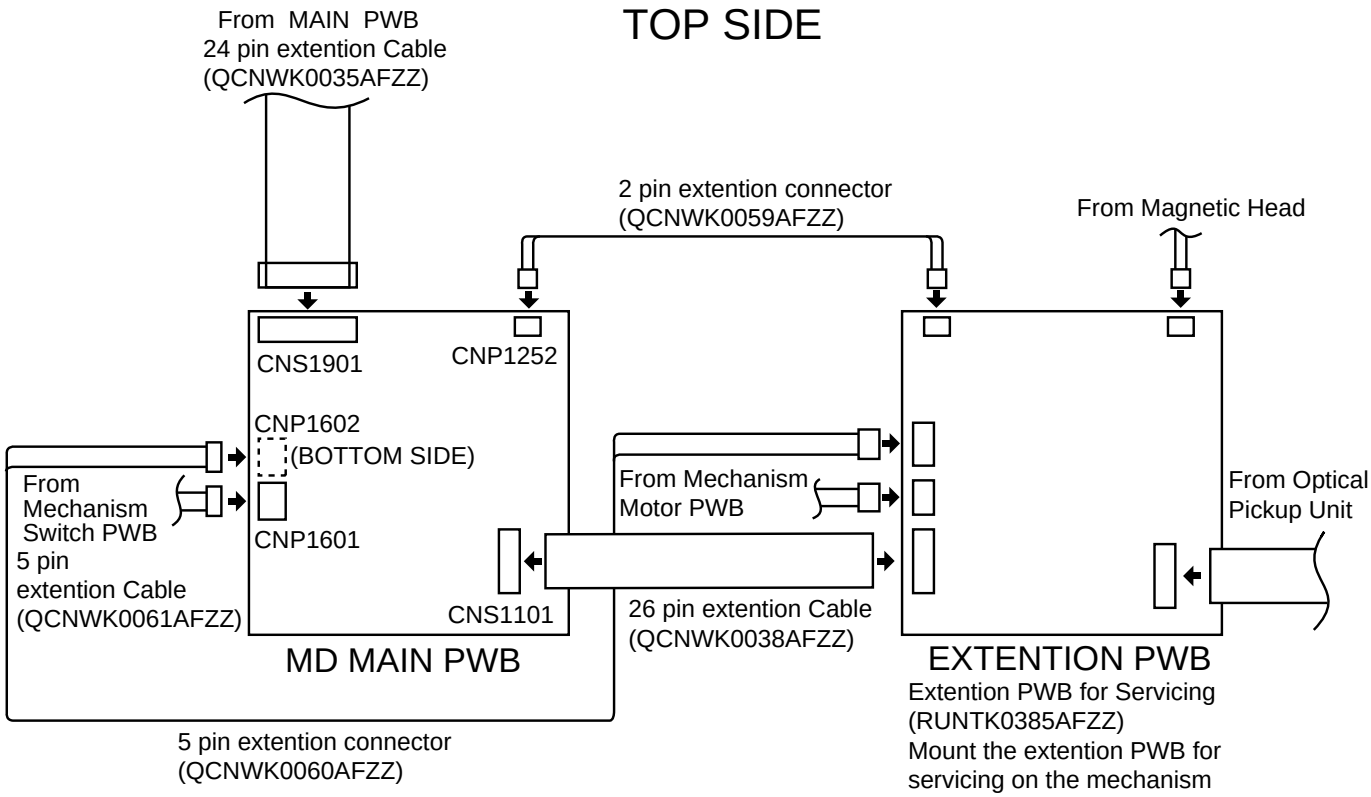


Figure 29-3

EXPLANATION OF ERROR DISPLAY

Error display	Errors	Corrective action
Can't REC	• Defect occurred 10 times successively during REC-PLAY. • Due to occurrence of defect during REC-PLAY the recordenable cluster became zero.	• Check that disc is free from flaws, dust, fingerprint, black spots, etc. Check for significant disalignment and runout of disc.
Can't COPY	• The following judgment was made based on the channel status of digital signal which was input from D-IN during (1) Other than audio uses (2) Other than home-uses (3) Check whether the D-IN input source is copy-inhibited CD.	• Failure of copy from CD due to inversion of COPY bit.
Din UNLOCK	• The following result was obtained with respect to the digital signal input from D-IN during REC-PAUSE or REC-PLAY. (1) PLL of digital IN was unlocked.	• Check for troubles in D-IN signal line.
TOC FULL	• During REC-PLAY the recording area was completely filled with data so that there is no area to register music and character information (music name and disc name). • When an attempt to enter REC-PAUSE or DIVIDE mode or to write the character information was made, the UTOC writing area was full of data.	• Replace disc with a recording disc having an area to register UTOC. • Replace disc with another record/playback disc having a sufficient area to write UTOC.
UTOC ERR R	• FTNO > LTNO • FTNO ≠ 0 or 1 • UTOC record on disc could not be read.	• UTOC data has error. Replace disc with another disc.
UTOC ERR A	• Start address > End address	• UTOC data has error. Replace disc with another disc.
UTOC ERR L0~4	• Data of UTOC 0 to 4 was looped.	• UTOC data has error. Replace disc with another disc.
NOT AUDIO	• Nonaudio data was recorded in the track mode of TNO which is currently selected.	• Select another TNO or replace the disc.
? DISC	• "MINI" data of system ID written with ASCII code in TOC is not correct. • The disc type written in TOC is not for premastered MD, recording MD or hybrid MD.	• The disc is nonstandard disc. Replace disc with another disc, and check.
DISC FULL	• When an attempt to set REC-PAUSE was made, there was no record-enable area in the disc.	• Replace the disc with another record disc having record-enable area.
PLAYBACK MD	• An attempt to set REC-PAUSE or to edit was made on the playback-only disc.	• Replace the playback-only disc with record disc.
PROTECTED	• An attempt to record or edit was made on the record/playback disc whose safety lug has been set to careless protected. Redo on another track.	• Release the safety lug, and try again.
Can't EDIT	• The specific editing conditions were not satisfied in editing.	• Operation procedure is not proper. Redo, following the correct operation procedure. • Attempt to edit, changing the place.
TEMP OVER	• Temperature in the set rose excessively due to occurrence of some trouble.	• Check whether the MD unit was used in hot place.
DISC ERR RD PA WR	• The read data was not correct or data could not be read correctly. • An error occurred during recording of music data, and it could not be recorded correctly.	• TOC or UTOC data contain error or disc has flaw. Replace the disc.
TOC ERR S TOC ERR R TOC ERR T	• The read TOC data was not correct. • An attempt to read TOC was made, but it could not be read.	• The TOC information recorded on the disc does not conform to the MD standard. Replace the disc. • The disc has flaw. Replace the disc.

Error display	Errors	Corrective action
UTOC W ERROR	• An error occurred during UTOC rewriting, so that UTOC could not be rewritten corrctly.	• The disc has flaw. Replace the disc.
FOCUS ERROR	• When the disc was loading, the focus could not be set.	• Check that the disc is free form flaw, dust, fingerprint and black spot. Check that the disc does not have significant disalignment or run-out.
BLANK MD	• When UTOC was read, it was found that total TNO and the number of characters of NAME was 0.	• Check whether the disc is recordable one by preforming recording.
DEFECT	• Focus retract error occurred due to shock during REC-PLAY.	• Check that the disc is free form flaw, dust, fingerprint and black spot. Check that the disc does not have significant disalignment or run-out.
TOC W ERROR	• Although UTOC can be read, UTOC cannot be rewritten.	• Check whether contact of recording head is normal. Check for wire breakage between PWB and the recording head.
MD ERROR	• EEPROM data is not correct.	• Once reset, and redo. If failure remains persistently, replace EEPROM.

EXPLANATION OF MECHANISM ERROR

Error display	Errors
MECHA_ERR1_* MECHA_ERR2_* MECHA_ERR3_*	Ejection is not completed. Head-up is not completed. Head-down is not completed.

		HINF (IC1401 (97) PIN)
* = E	Ejection completed position	< 2.77 V
* = M	Horizontal midway position	> 2.77 V
* = L	Load completed position	1.68 ~ 2.23 V
* = D	Head-down position	1.19 ~ 1.66 V

TEST MODE

Test functions

● The TEST mode is entered if the following button is pressed twice when initialization is performed or power supply is restored after power failure

Test name	Button name	Button name
CD test	N-EDIT	C-PLY
MD test	TOC	M-PLY
AUX test	TOC	M-STP
MDDISP test	TIMER	M-PLY
Calendar test	N-EDIT	TUN
REC aging test	TOC	M-REC
KEY test	N-EDIT	VOL-UP

Leaving the TEST mode

Execute RESET START in specific TEST mode by using the POWER button.
* Excepting MD TEST mode and changer shipping mode

When power supply failure is detected in specific TEST mode, the TEST mode is canceled, and power failure operation is executed.

Explanation of TEST mode

1. CD test

a. Turn POWER on, and set FUNCTION CD.
b. The subsequent operation is explained in the item "CD test mode".
c. For the model with x2 speed function, set the x2 speed mode with the H-EDIT button.

2. Calendar test

One day is counted as 0.5 seconds.
Initial value (when it is not set): AM0:00
Initial value (when it is set): Current time

3. MD TEST mode

a. Turn POWER on, and set function MD.
b. The command corresponding to the pressed button is sent while the button is held down. (Min 5 communication)

The character data for 10 characters is sent from the MD microcopmputer and displayed.
(Classification of requested character type is not specified; Character classification from MD must be disregarded.)

c. EJECT and LOADING operations must be normal operations.
d. The TEST mode must be canceled in the following procedure.
   1) POWER OFF command (1F) is sent to MD.
   2) Waiting until the function bit:00 (POWER OFF) is confirmed.
   3) MD microcomputer resetting

After initiation of communication the TEST mode command (D1) is sent without automatic adjustment until the MD mode (E8) is set.
(In case of MD mode E8 the music calendars 1, 3, 5 and 7 light. The indication must conform to this lighting.

4) Subsequent operation must be normal operation.

Reference

To leave the mode having no automatic adjustment, reset or turn off power.

● Buttons and commands to be used in MD TEST mode

Button name	Command	Functions
POWER+MD PLAY	FA	Setting the MD TEST mode
C-PLAY	B2	Setting the servo adjustment mode
E-START	B4	Setting the record mode
T-EDIT	F2	Setting other mode
M-REC	A8	Menu change in specific mode
M-PLAY	A2	Execution of menu
M-STOP	A7	Interruption of menu
CH-UP	AA	Slide motor external periphery feed
CH-DOWN	AC	Slide motor internal periphery feed
VOL-UP	F3	Adjustment value +1
VOL-DWN	F4	Adjustment value -1
C-STP	F5	Indication selection
POWER	1F+D1	In MD TEST mode
LOADING-SW ON	B5	Execution of loading operation
M-EJECT	B3	EJECT operation
TOC+CH+UP	F0	Setting the MD TEST mode 2

4. MD indication test mode

a. Turn POWER on, and set FUNCTION MD.
b. After initiation of communication the MD indication TEST mode command (D0) is sent until MD data byte 19, bit 5 = 1 is obtained.
c. Subsequent operation must be normal operation. Character data for 10 characters is sent from the MD microcomputer. It is indicated as dot section indication.

5. Key test

The KEY TEST mode is entered by pressing the E-START button and VOL-UP button.
KEY-OFF results in whole display turning-off.
The segment corresponding to KEY lights.

Button	Segment
C-STOP	⋮
VOL-DWN	REC
S-MODE	TOC
TUN	STEREO
E-START	Whole lighting excepting dot section
TIMER	PRGM
CH-DWN	CLOCK
JOG-UP	PM
ENTER	TOTAL
M-PLAY	kHz
EJECT	> (M.C >> 0)
DISC	◯2◯
TRAY1	DISC1 ◯
TRAY3	DISC3 ◯

Button	Segment
C-PLAY	MONO LP
VOL-UP	▮▮ (PAUSE)
SURROUND	ST
T-EDIT	Whole lighting excepting dot section
TOC	⊂▸
DISP	RANDAM
JOG-DWN	AM
CH-UP	3D SURROUND
M-STOP	REMAIN
M-REC	MHz
DISC1	◯1◯
DISC3	◯3◯
TRAY2	DISC2 ◯

When JOG input is detected, the segment lights for 0.5 sec.
When next input is detected within 0.5 sec, the timer setting is updated.
To exit from the KEY TEST mode, press the POWER button.

7. AUX TEST mode

The AUX TEST mode is entered by pressing the POWER+M-STOP buttons.
Whole display lights during TEST mode button input (min. 2 sec).
After completion of whole lighting the microcomputer version must be displayed for 1.5 seconds.

a. Turn POWER on, and set FUNCTION AUX.
   Set as follows:
   VOL center
   BASS center
   TRE center
b. Set VOL-MAX with the VOL-UP button.
   Set VOL-MIN with the VOL-DWN button.
   (VOL must be in 3 steps.)
c. Set BASS-MAX with the BASS-UP button.
   Set BASS-MIN with the BASS-DWN button.
   (BASS must be in 3 steps.)
d. Set TRE-MAX with TRE-UP button.
   Set TRE-MIN with the TRE-DWN button.
   (TRE must be in 3 steps.)
e. Function selection in the AUX TEST mode is enabled.
   Indication must be normal indication excepting AUX function.
f. To exit from the KEY TEST mode, press the POWER button.

8. MD REC aging test

Outline

CD is recorded continuously, and stability of MD is checked.

Procedure

1. After the TEST mode is set, set CD FUNC. PLAY mode must be REPEAT.
2. Loading CD/MD (manual).
3. Using the MD REC/PAUSE button and CD PLAY button, start sync REC (manual).
4. Perform REC operation until remaining MD REC becomes equal to zero.
5. CD stops when remaining MD REC becomes equal to zero.
   Set MD FUNC to execute ALL ERASE operation.
6. Set CD FUNC to execute MD REC PAUSE.
   Perform CD PLAY automatically.

Check stability of continuous recording by repeating steps 4, 5 and 6.

Notes:

VOL position must be 5.
Subsequent operation must be normal operation.
For models with x2 speed function, x2 speed aging with the H-EDIT button must be enabled after MD REC PAUSE.
(CD is also set to PLAY state.)

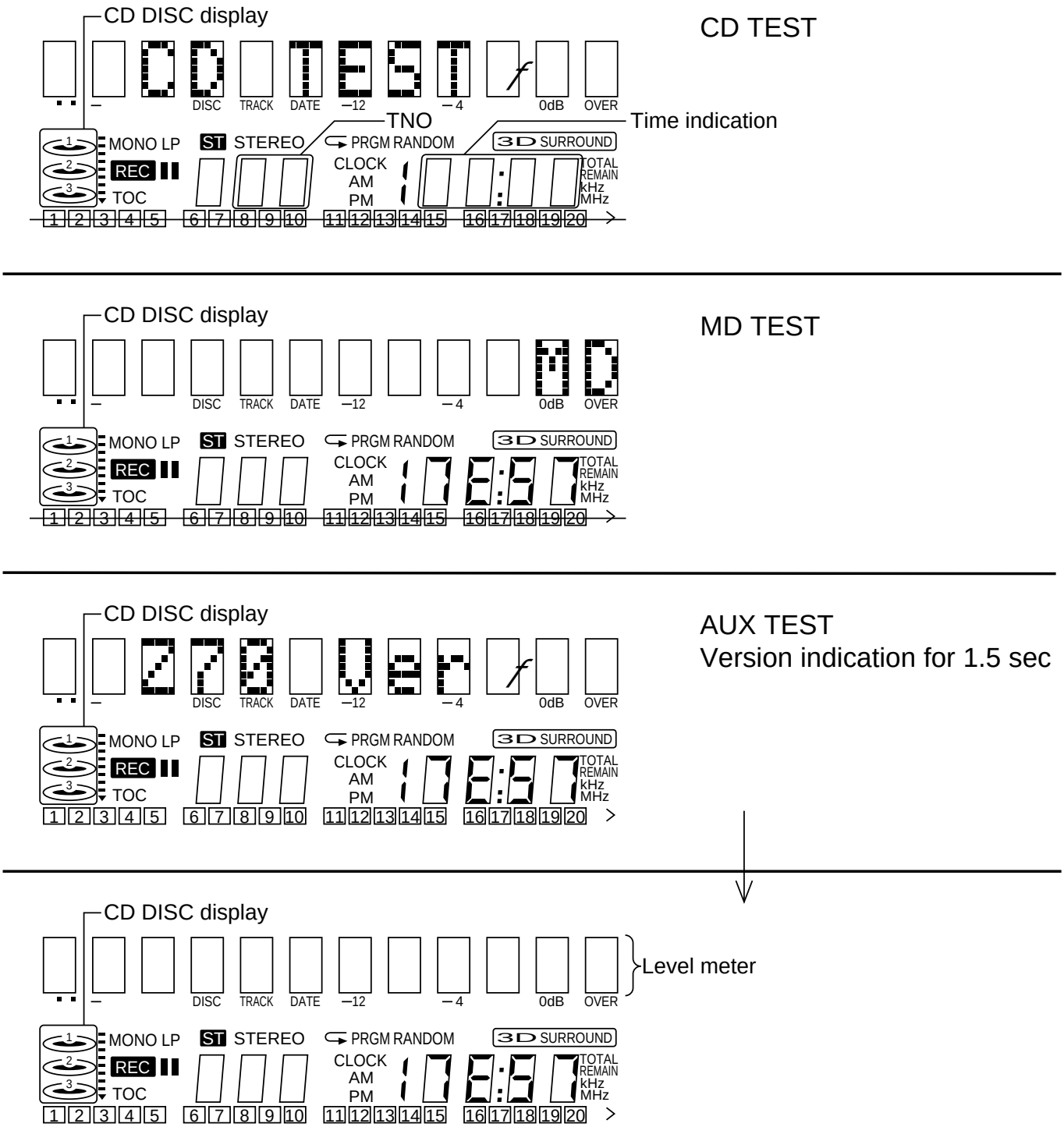


Figure 35 TEST mode

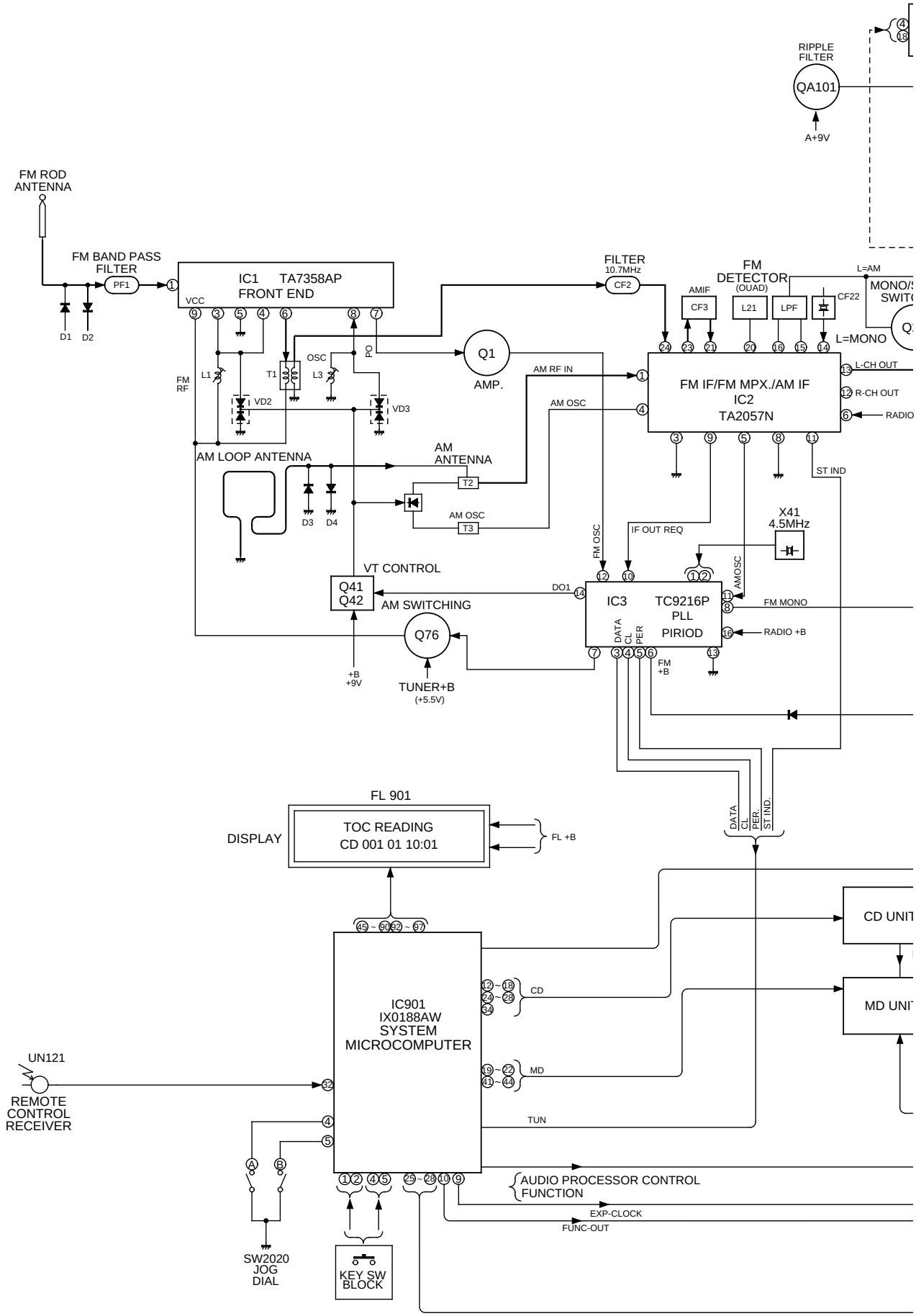


Figure 36 BLOCK DIAGRAM (1/6)

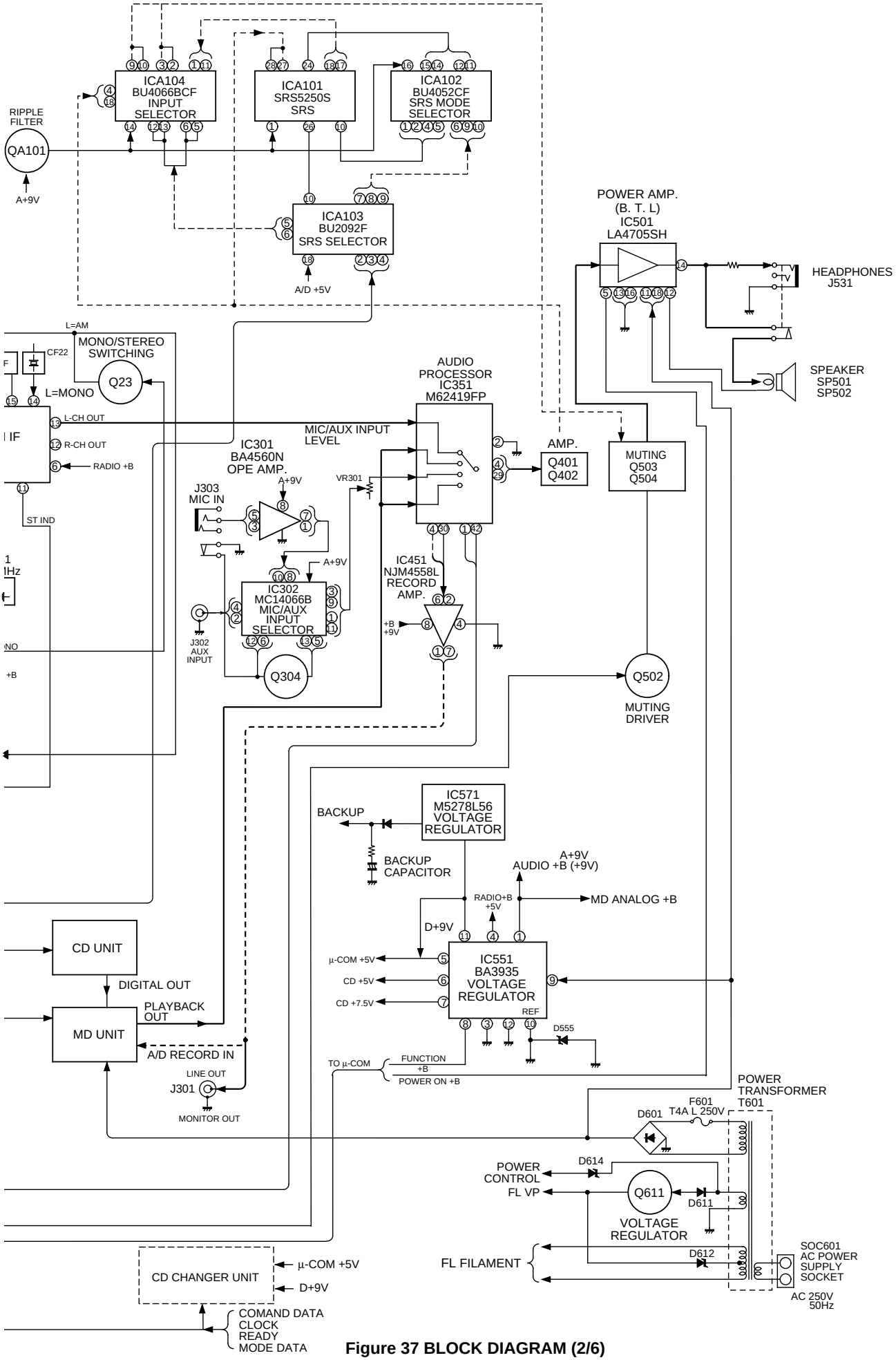


Figure 37 BLOCK DIAGRAM (2/6)

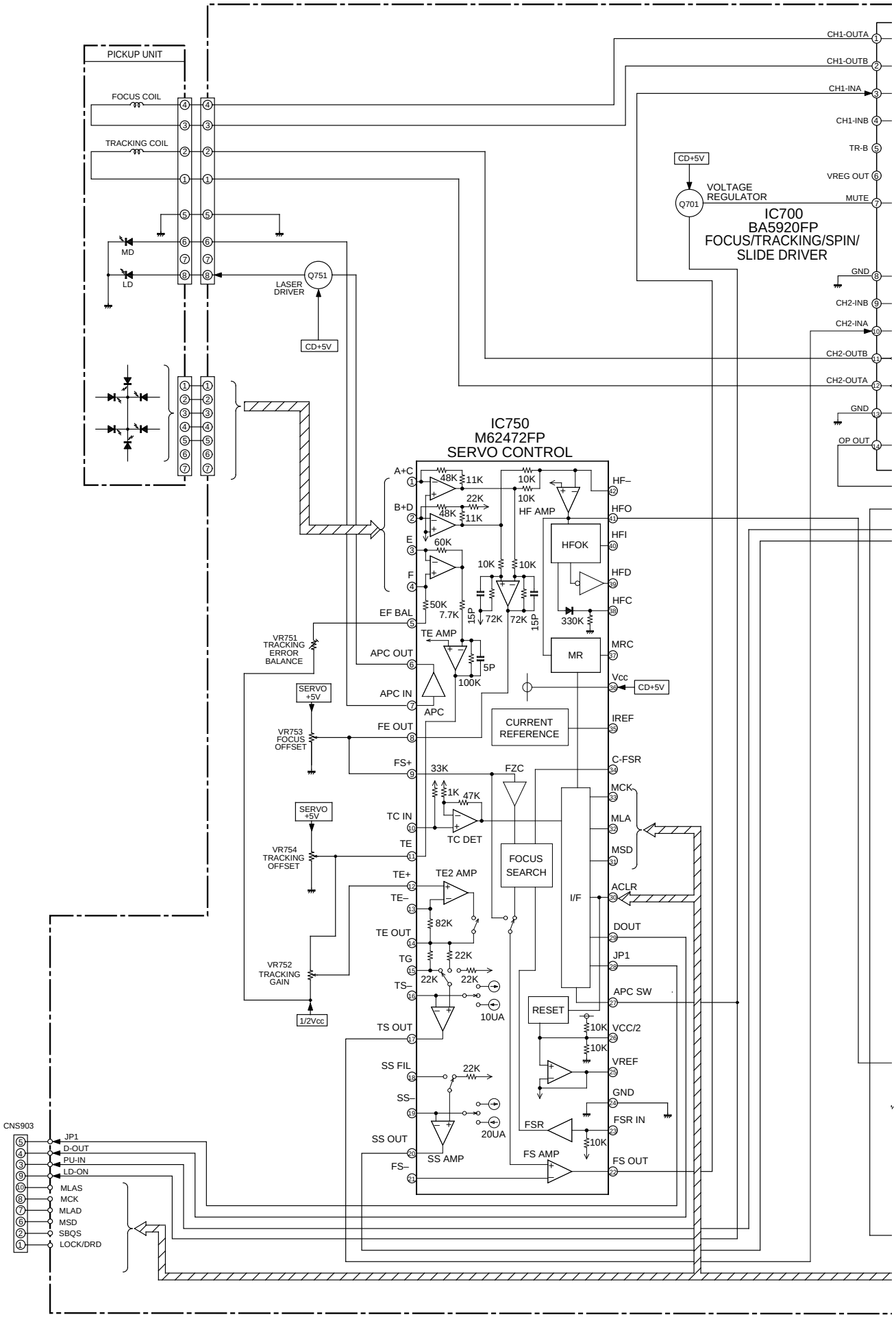


Figure 38 BLOCK DIAGRAM (3/6)

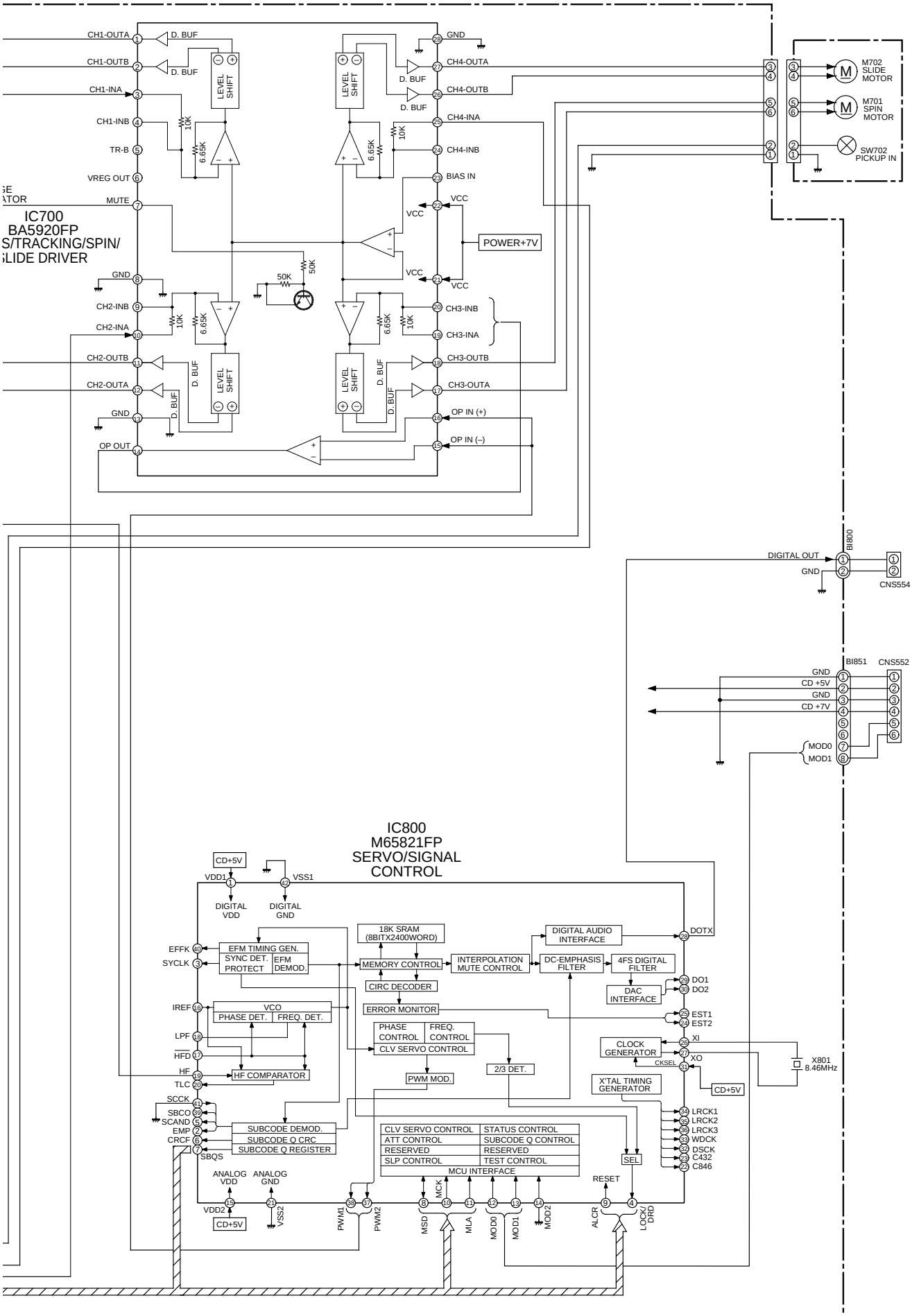


Figure 39 BLOCK DIAGRAM (4/6)

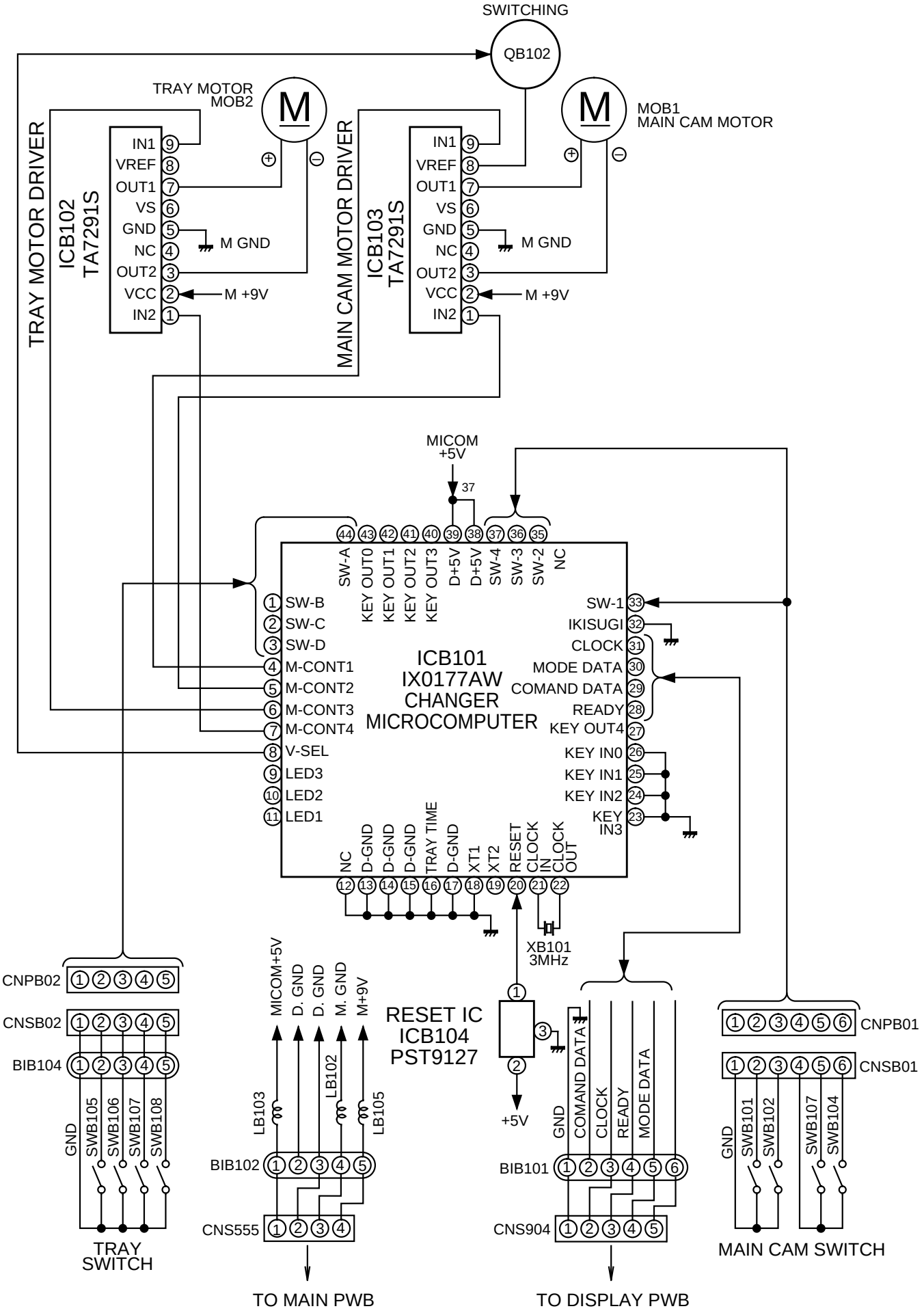


Figure 40 BLOCK DIAGRAM (5/6)

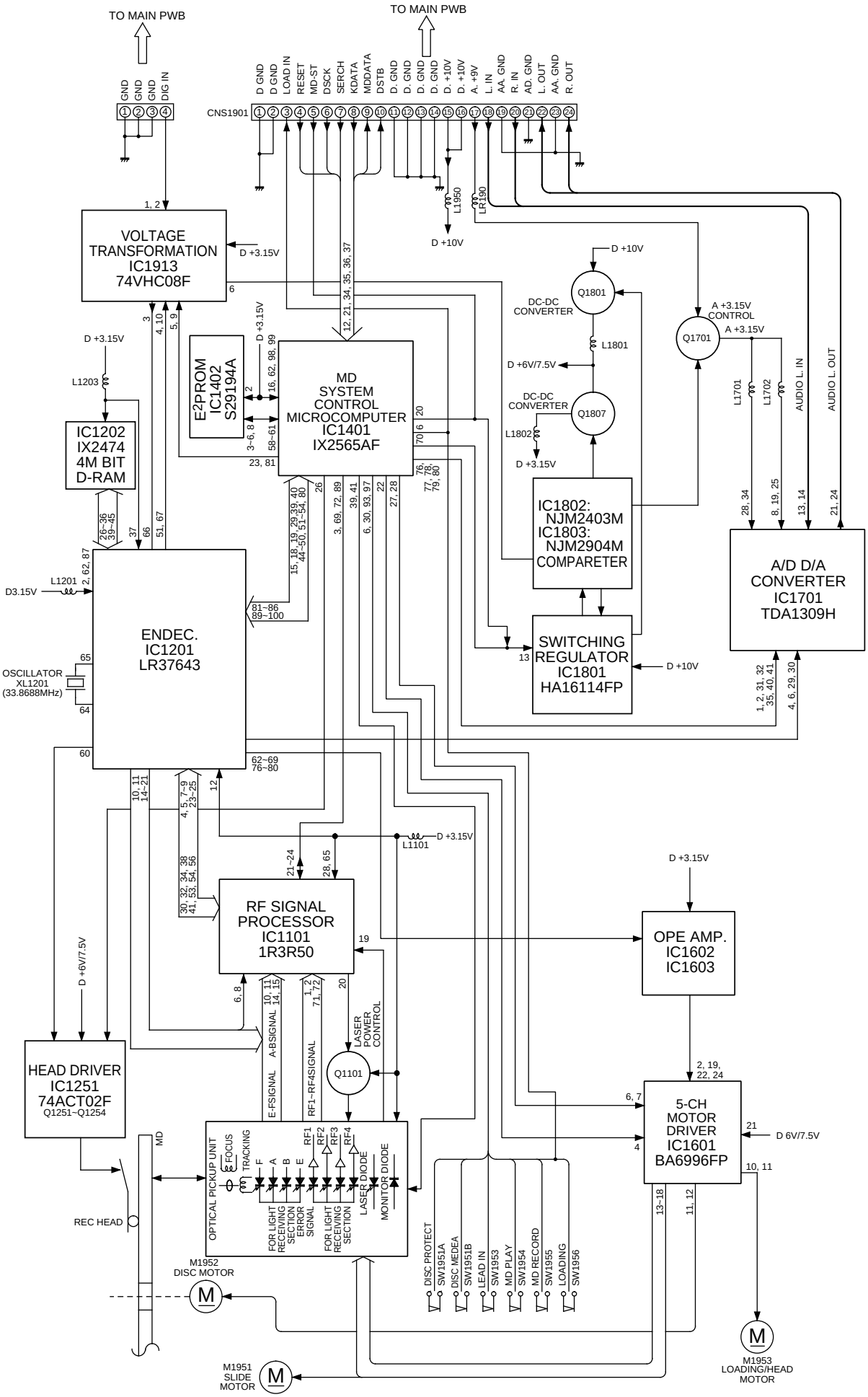
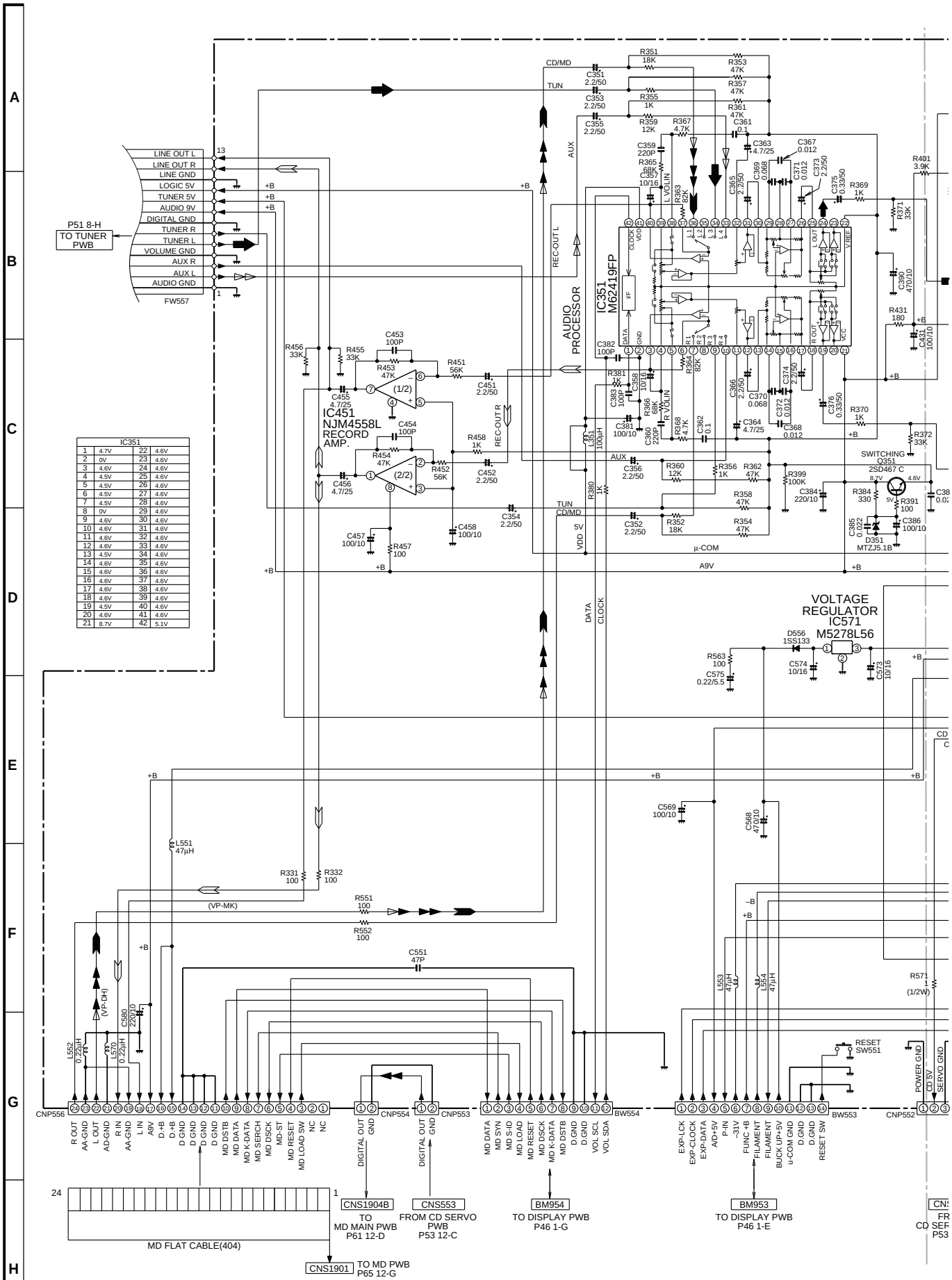


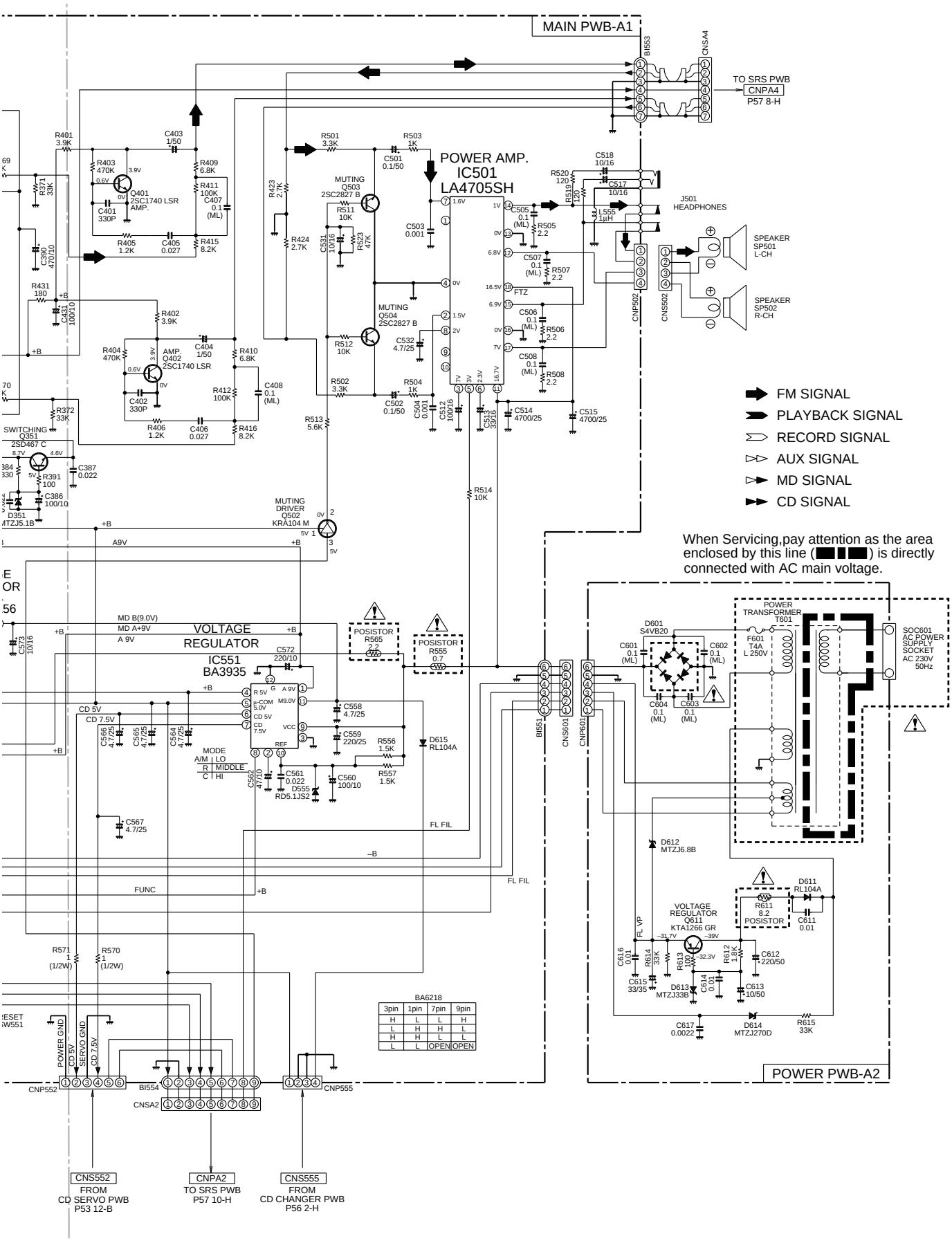
Figure 41 BLOCK DIAGRAM (6/6)



IC351			
1	4.7V	22	4.6V
2	0V	23	4.6V
3	4.6V	24	4.6V
4	4.5V	25	4.6V
5	4.5V	26	4.6V
6	4.5V	27	4.6V
7	4.5V	28	4.6V
8	0V	29	4.6V
9	4.6V	30	4.6V
10	4.6V	31	4.6V
11	4.6V	32	4.6V
12	4.6V	33	4.6V
13	4.5V	34	4.6V
14	4.6V	35	4.6V
15	4.6V	36	4.6V
16	4.6V	37	4.6V
17	4.6V	38	4.6V
18	4.6V	39	4.6V
19	4.5V	40	4.6V
20	4.6V	41	4.6V
21	8.7V	42	5.1V

NOTES ON SCHEMATIC DIAGRAM can be found on page 69.

Figure 42 SCHEMATIC DIAGRAM (1/18)



7	8	9	10	11	12

Figure 43 SCHEMATIC DIAGRAM (2/18)

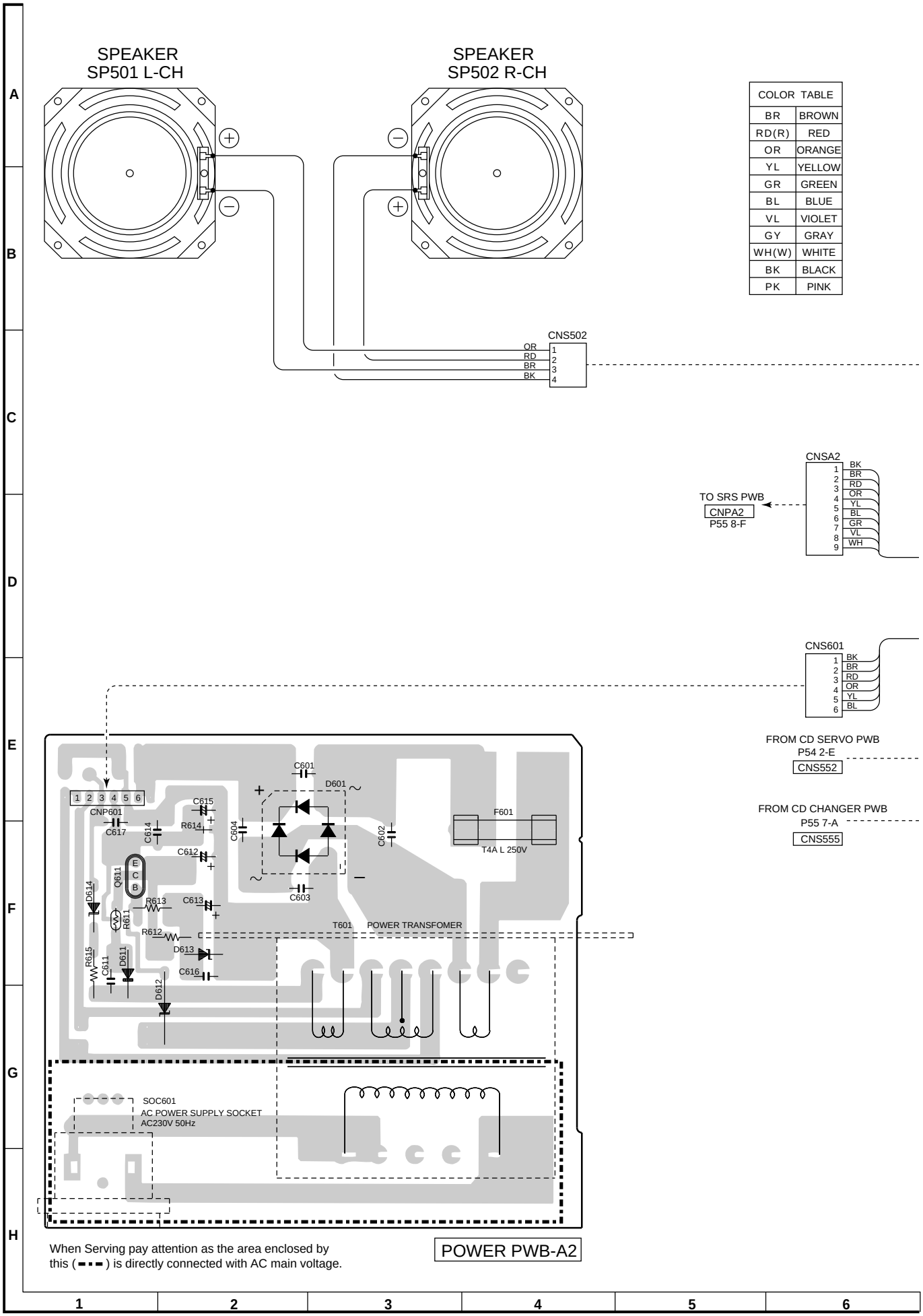
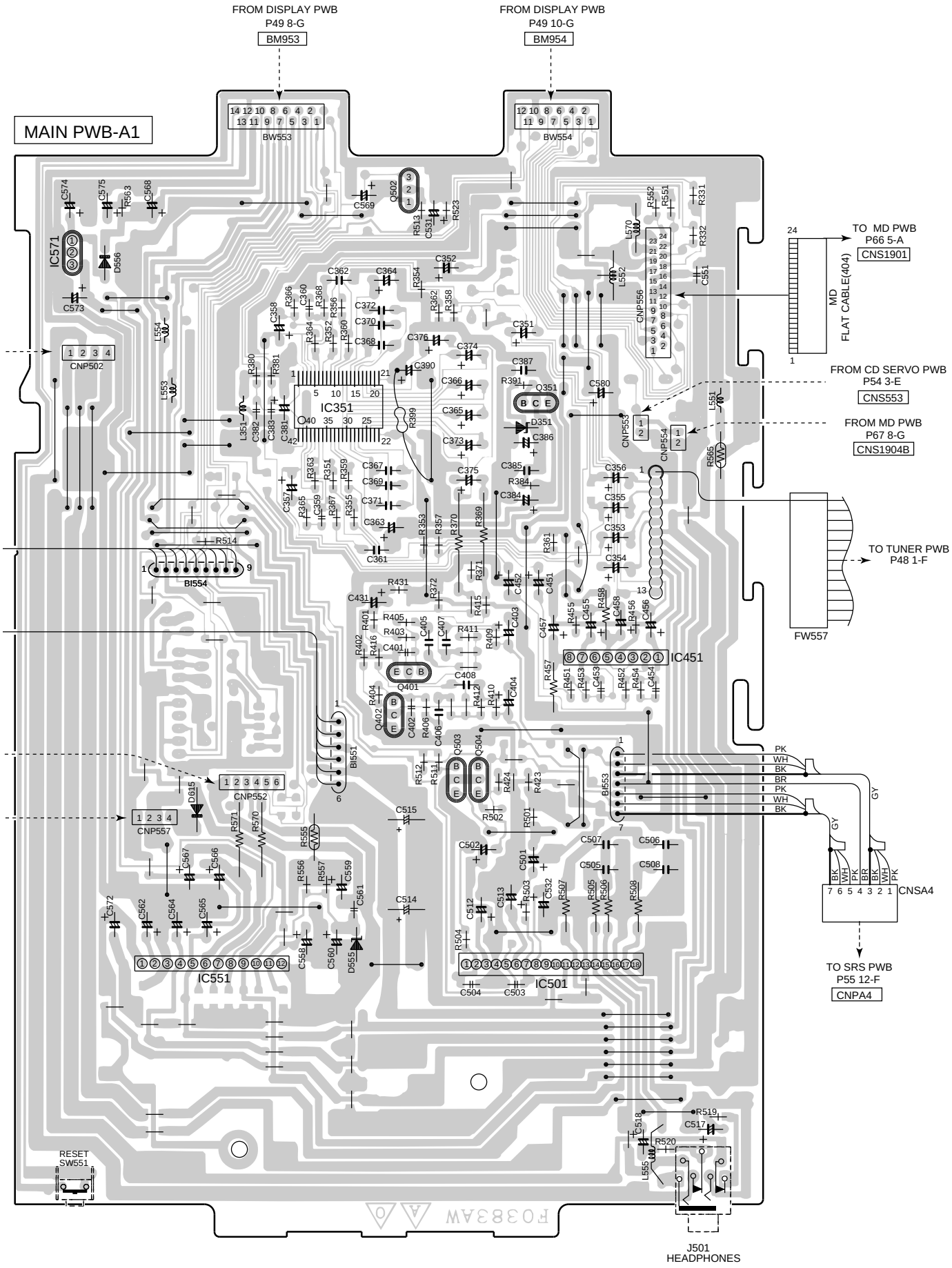
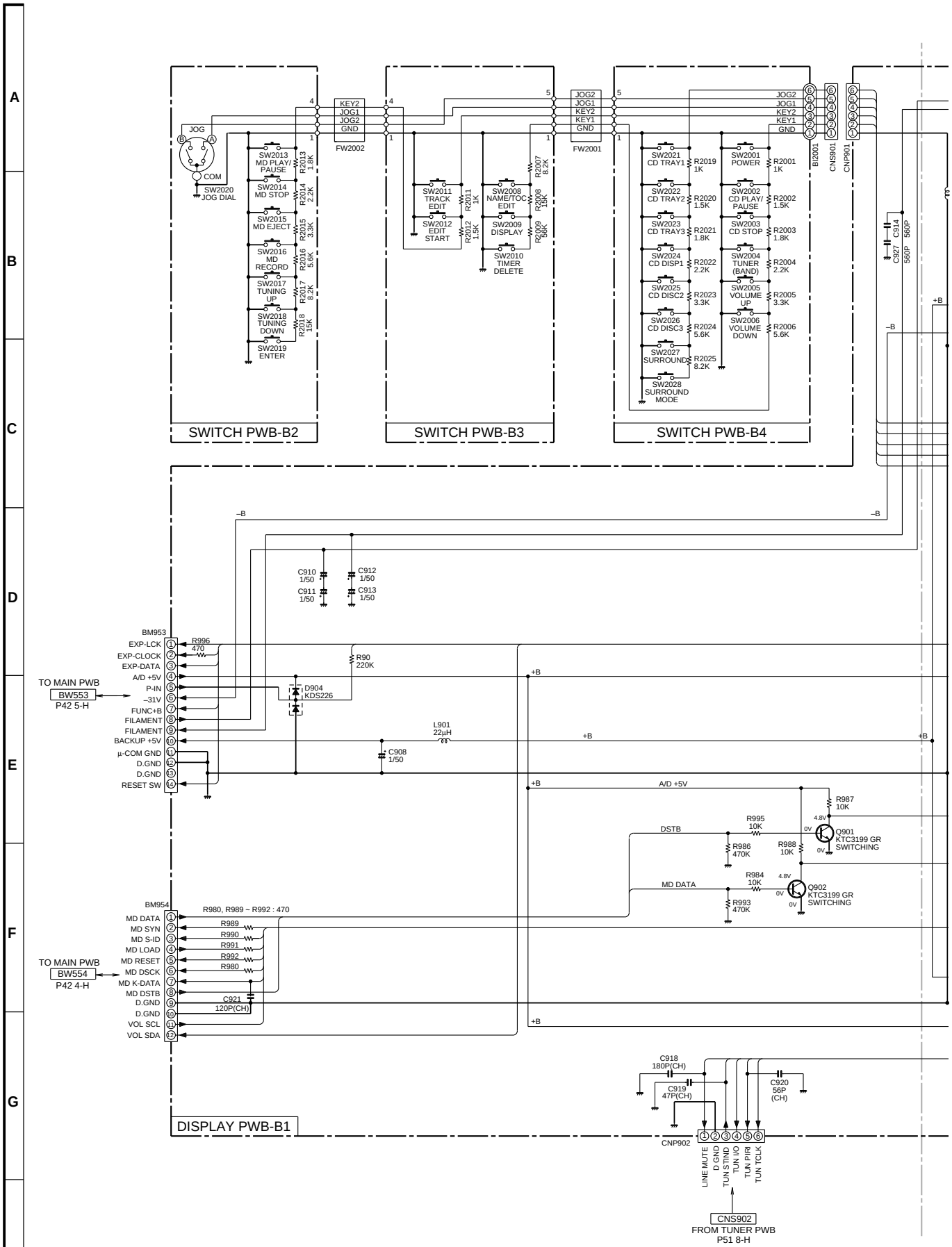


Figure 44 WIRING SIDE OF P.W. BOARD (1/9)



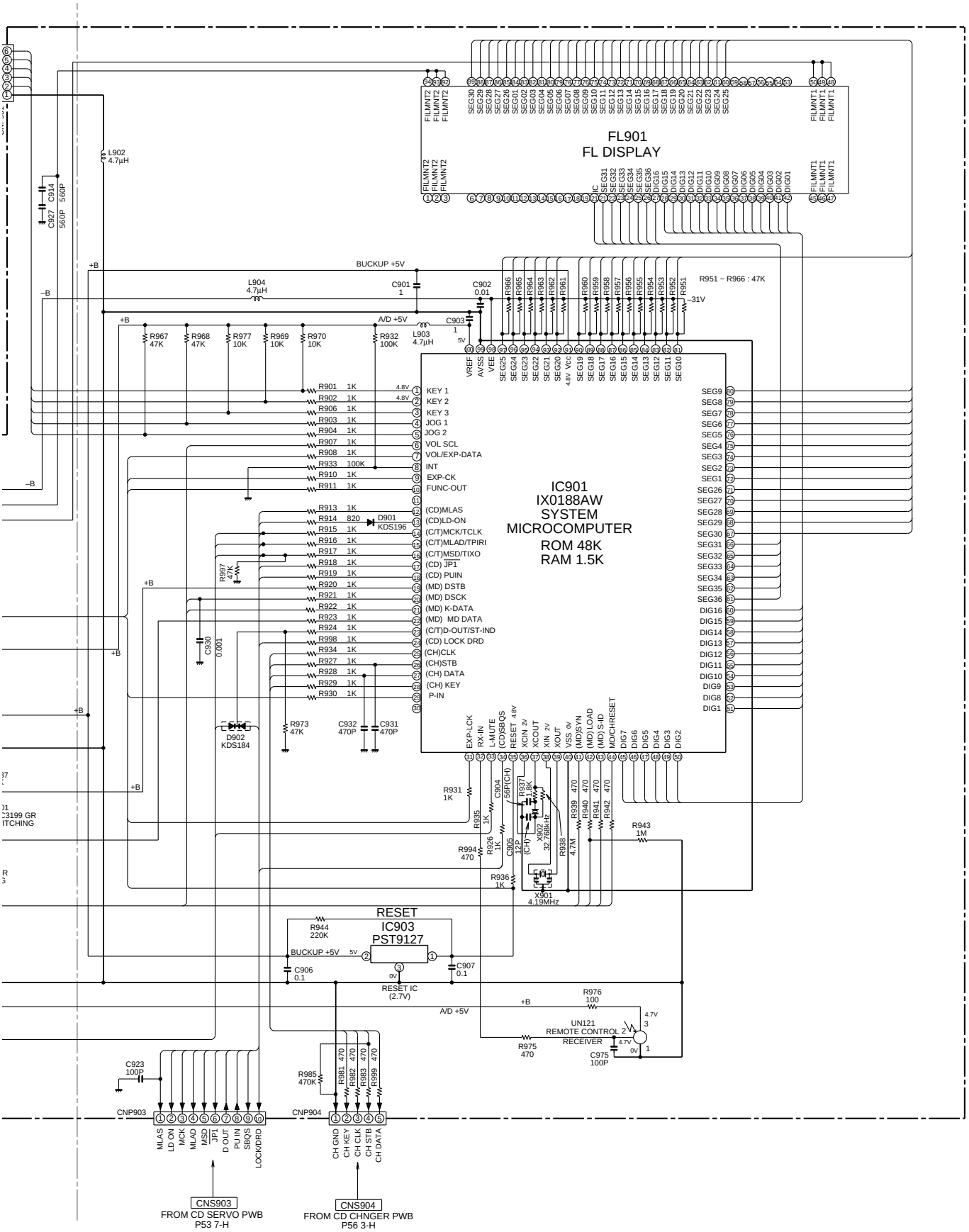
7	8	9	10	11	12

Figure 45 WIRING SIDE OF P.W. BOARD (2/9)



NOTES ON SCHEMATIC DIAGRAM can be found on page 69.

Figure 46 SCHEMATIC DIAGRAM (3/18)



7	8	9	10	11	12

Figure 47 SCHEMATIC DIAGRAM (4/18)

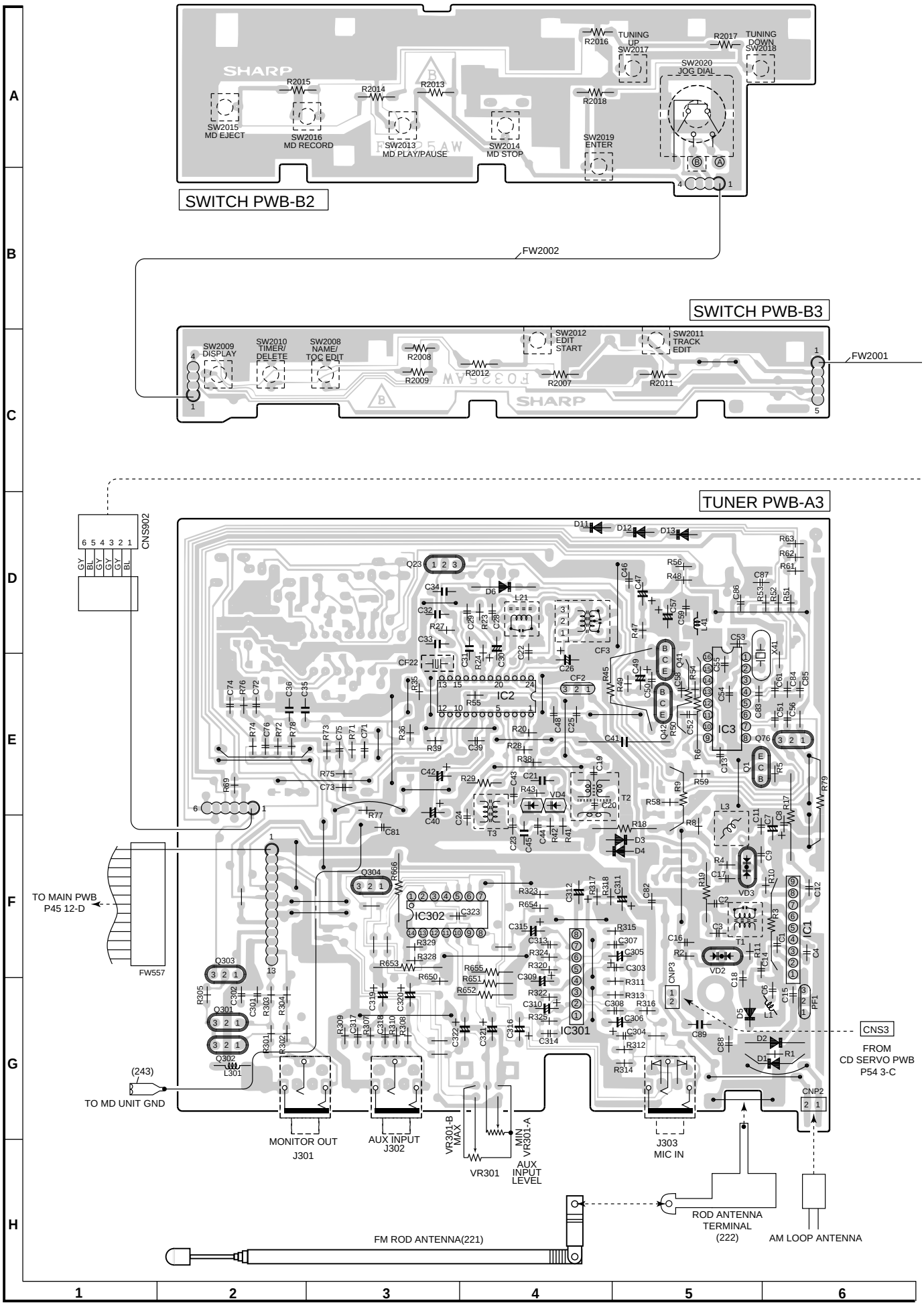
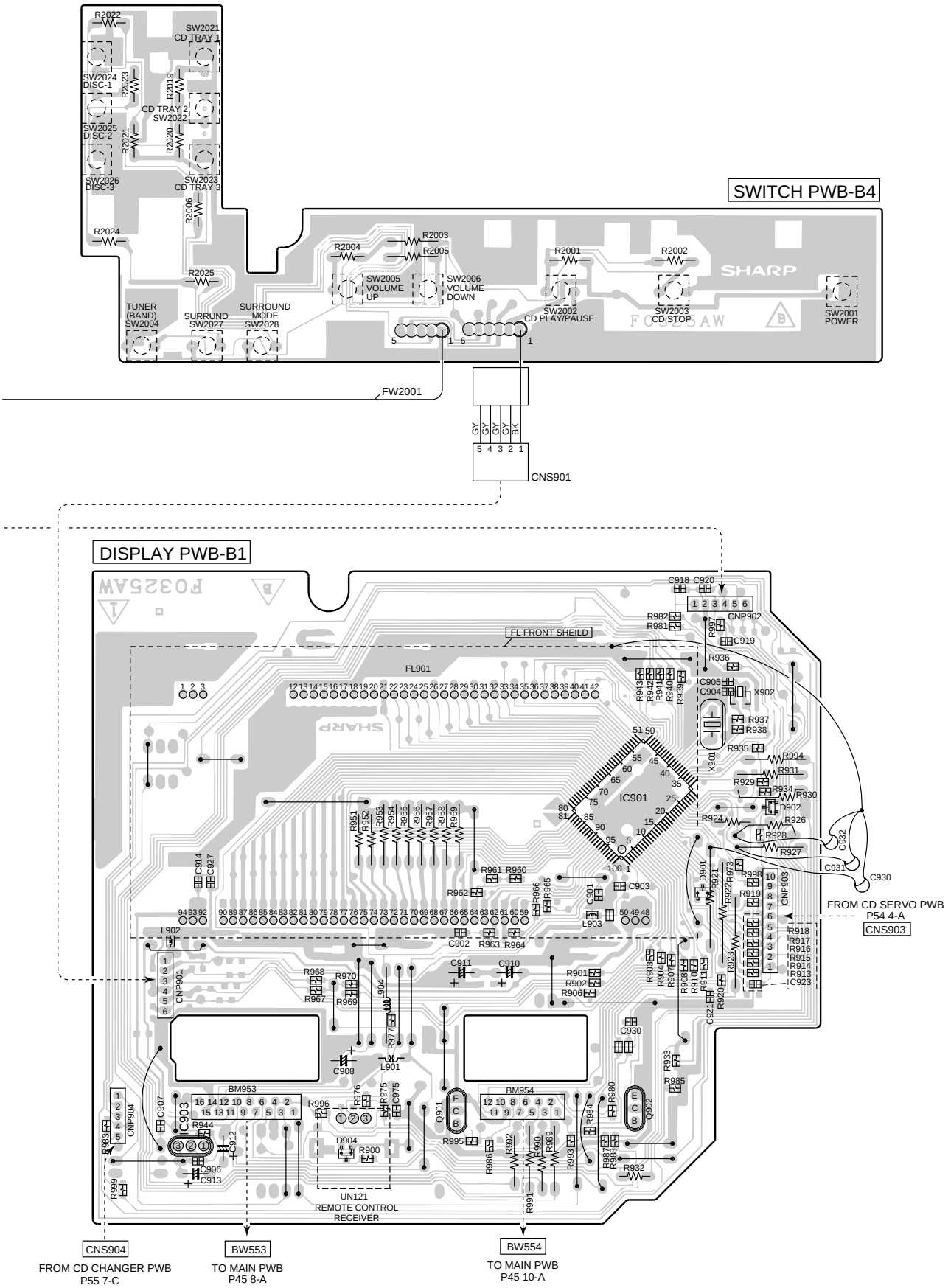


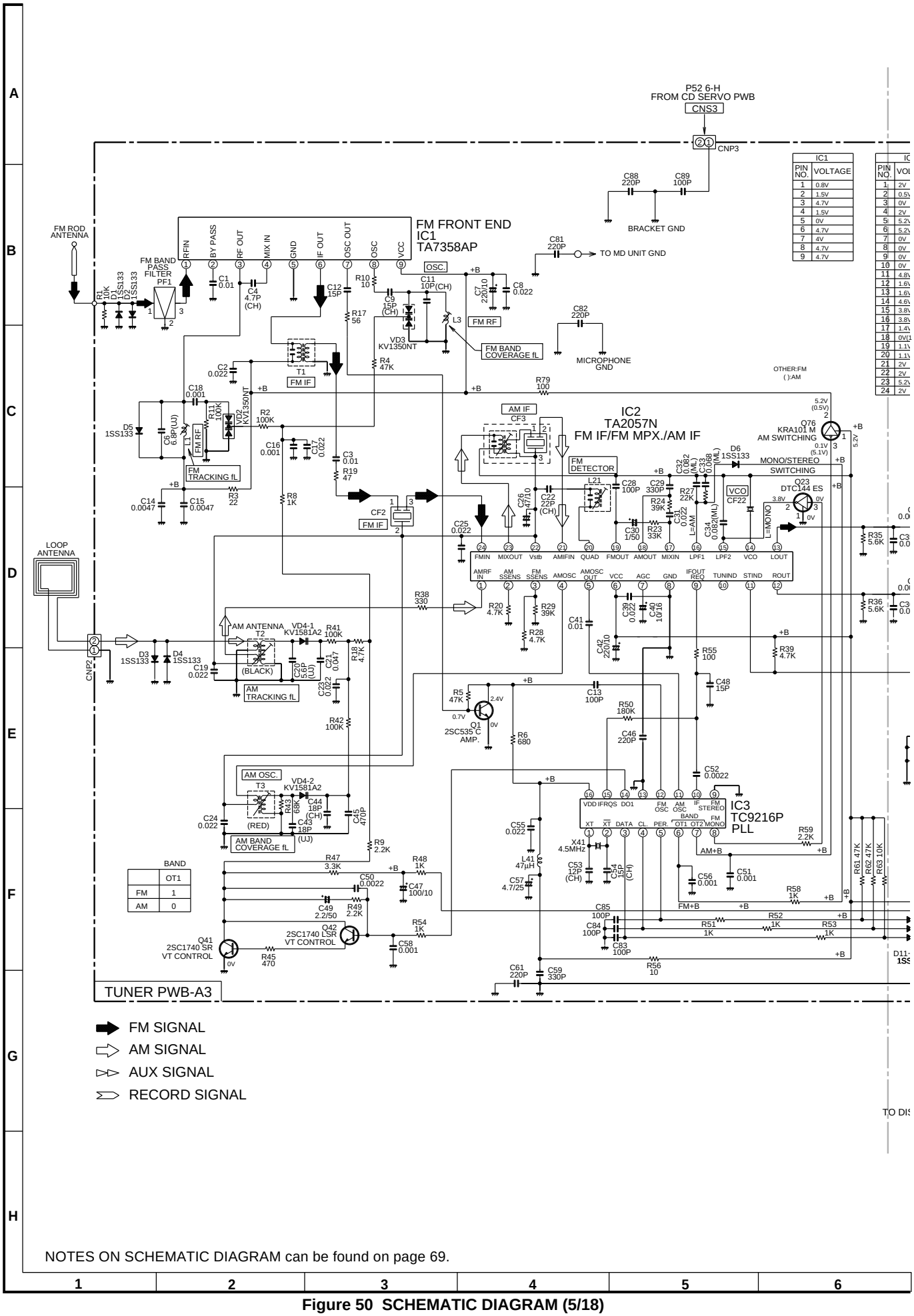
Figure 48 WIRING SIDE OF P.W. BOARD (3/9)



COLOR	BR	RD(R)	OR	YL	GR	BL	VL	GY	WH(W)	BK	PK
TABLE	BROWN	RED	ORANGE	YELLOW	GREEN	BLUE	VIOLET	GRAY	WHITE	BLACK	PINK

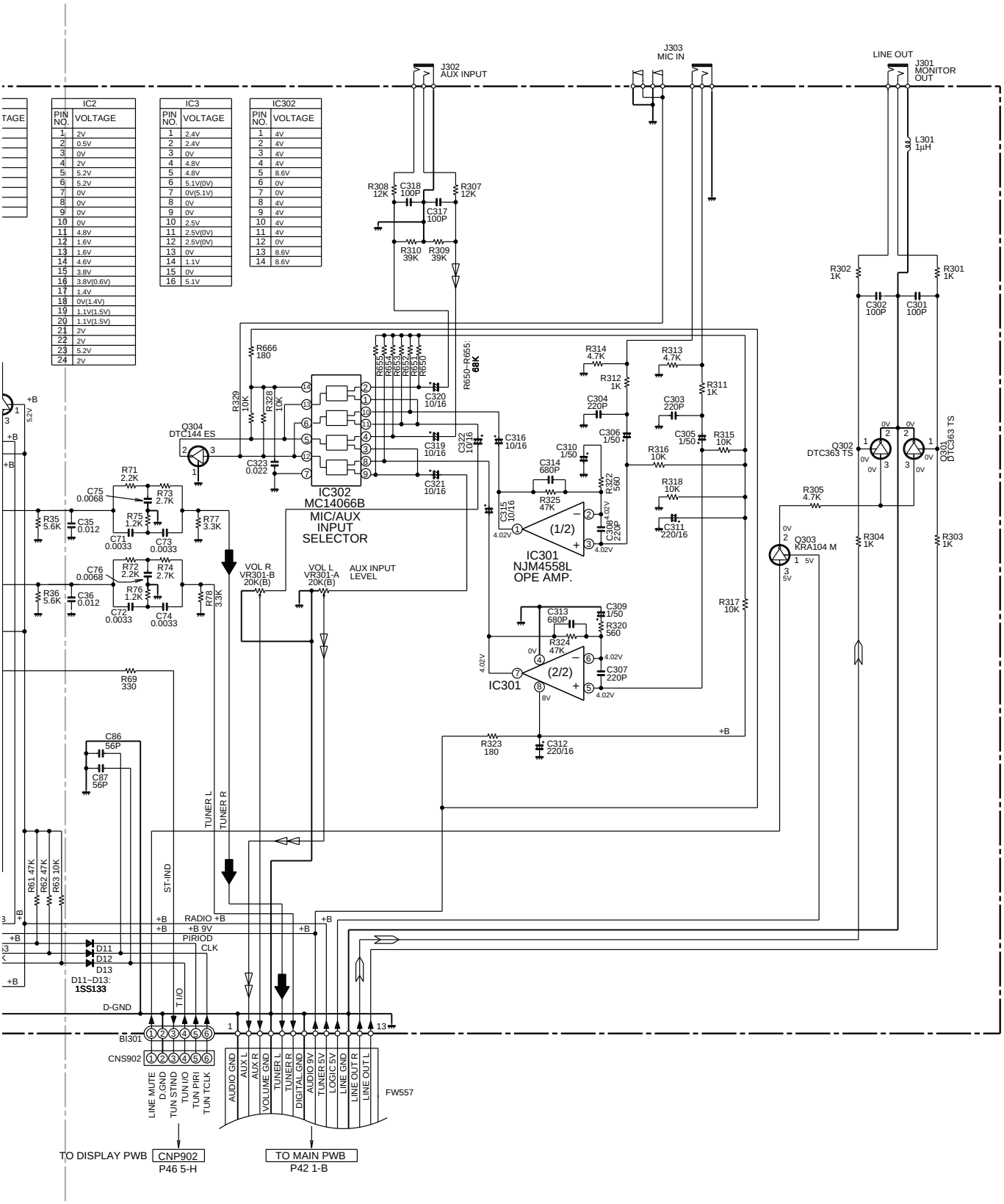
7	8	9	10	11	12

Figure 49 WIRING SIDE OF P.W. BOARD (4/9)



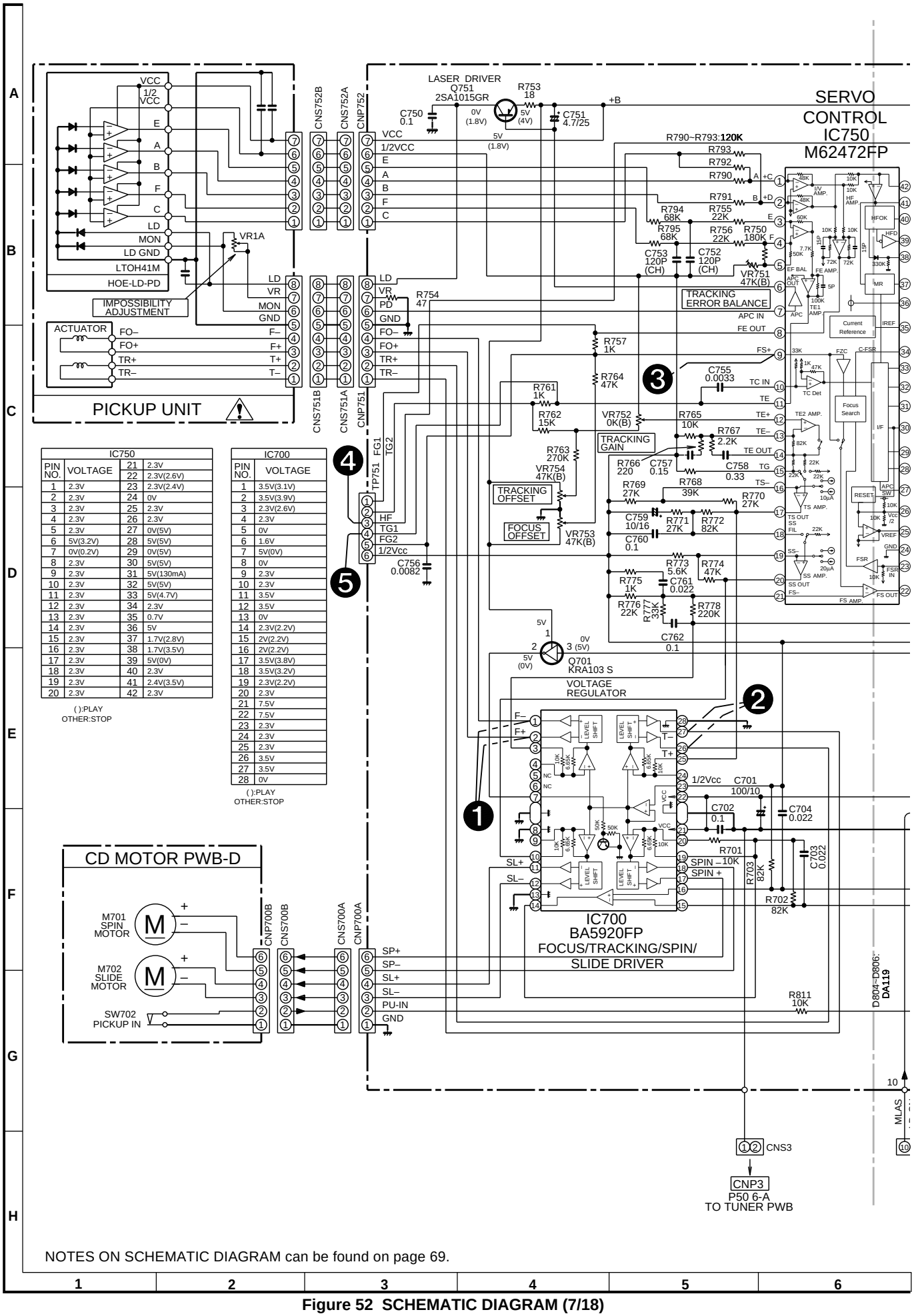
NOTES ON SCHEMATIC DIAGRAM can be found on page 69.

Figure 50 SCHEMATIC DIAGRAM (5/18)



7	8	9	10	11	12

Figure 51 SCHEMATIC DIAGRAM (6/18)



IC750			
PIN NO.	VOLTAGE	21	2.3V
		22	2.3V(2.6V)
1	2.3V	23	2.3V(2.4V)
2	2.3V	24	0V
3	2.3V	25	2.3V
4	2.3V	26	2.3V
5	2.3V	27	0V(5V)
6	5V(3.2V)	28	5V(5V)
7	0V(0.2V)	29	0V(5V)
8	2.3V	30	5V(5V)
9	2.3V	31	5V(130mA)
10	2.3V	32	5V(5V)
11	2.3V	33	5V(4.7V)
12	2.3V	34	2.3V
13	2.3V	35	0.7V
14	2.3V	36	5V
15	2.3V	37	1.7V(2.8V)
16	2.3V	38	1.7V(3.5V)
17	2.3V	39	5V(0V)
18	2.3V	40	2.3V
19	2.3V	41	2.4V(3.5V)
20	2.3V	42	2.3V

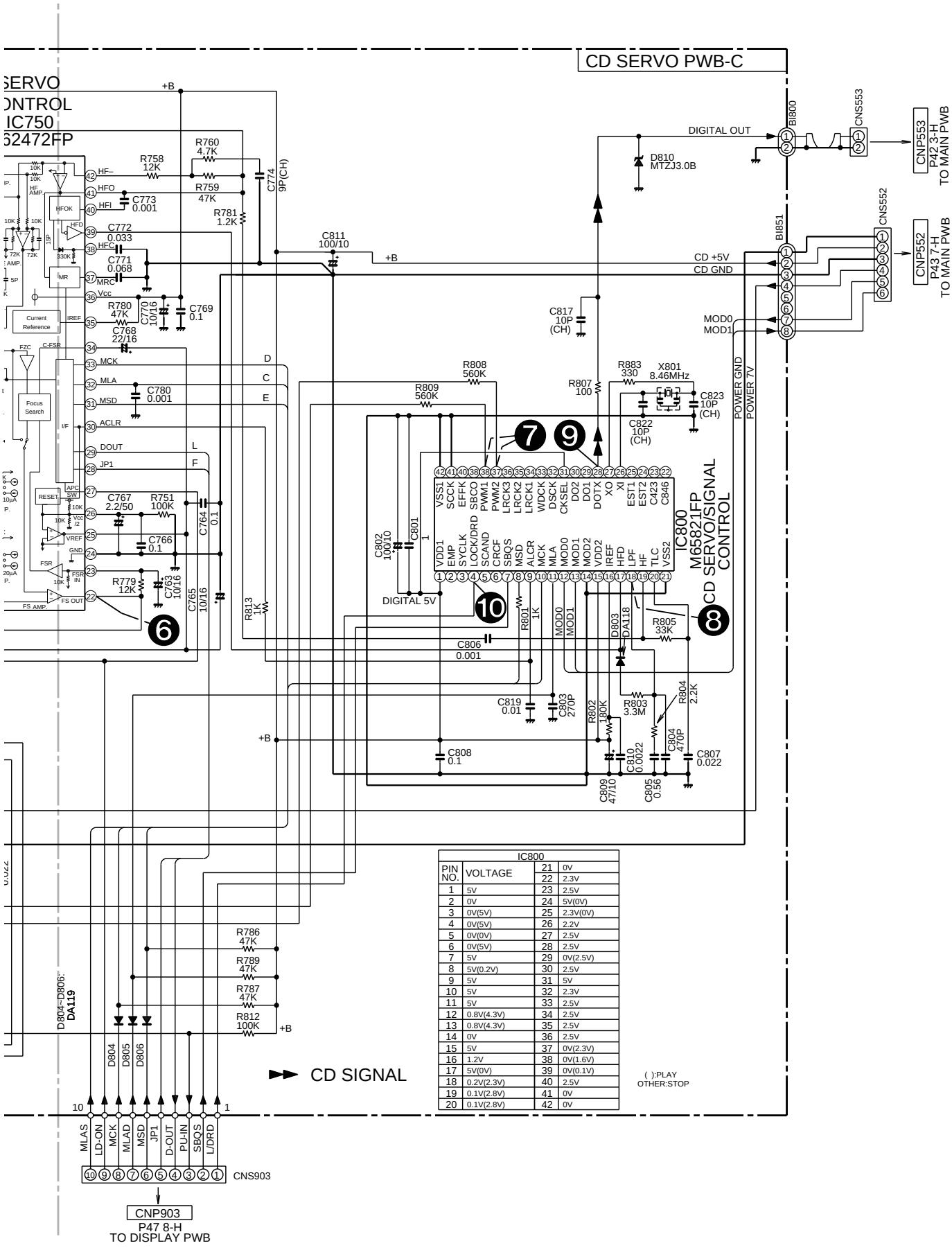
( ):PLAY
OTHER:STOP

IC700	
PIN NO.	VOLTAGE
1	3.5V(3.1V)
2	3.5V(3.9V)
3	2.3V(2.6V)
4	2.3V
5	0V
6	1.6V
7	5V(0V)
8	0V
9	2.3V
10	2.3V
11	3.5V
12	3.5V
13	0V
14	2.3V(2.2V)
15	2V(2.2V)
16	2V(2.2V)
17	3.5V(3.8V)
18	3.5V(3.2V)
19	2.3V(2.2V)
20	2.3V
21	7.5V
22	7.5V
23	2.3V
24	2.3V
25	2.3V
26	3.5V
27	3.5V
28	0V

( ):PLAY
OTHER:STOP

NOTES ON SCHEMATIC DIAGRAM can be found on page 69.

Figure 52 SCHEMATIC DIAGRAM (7/18)

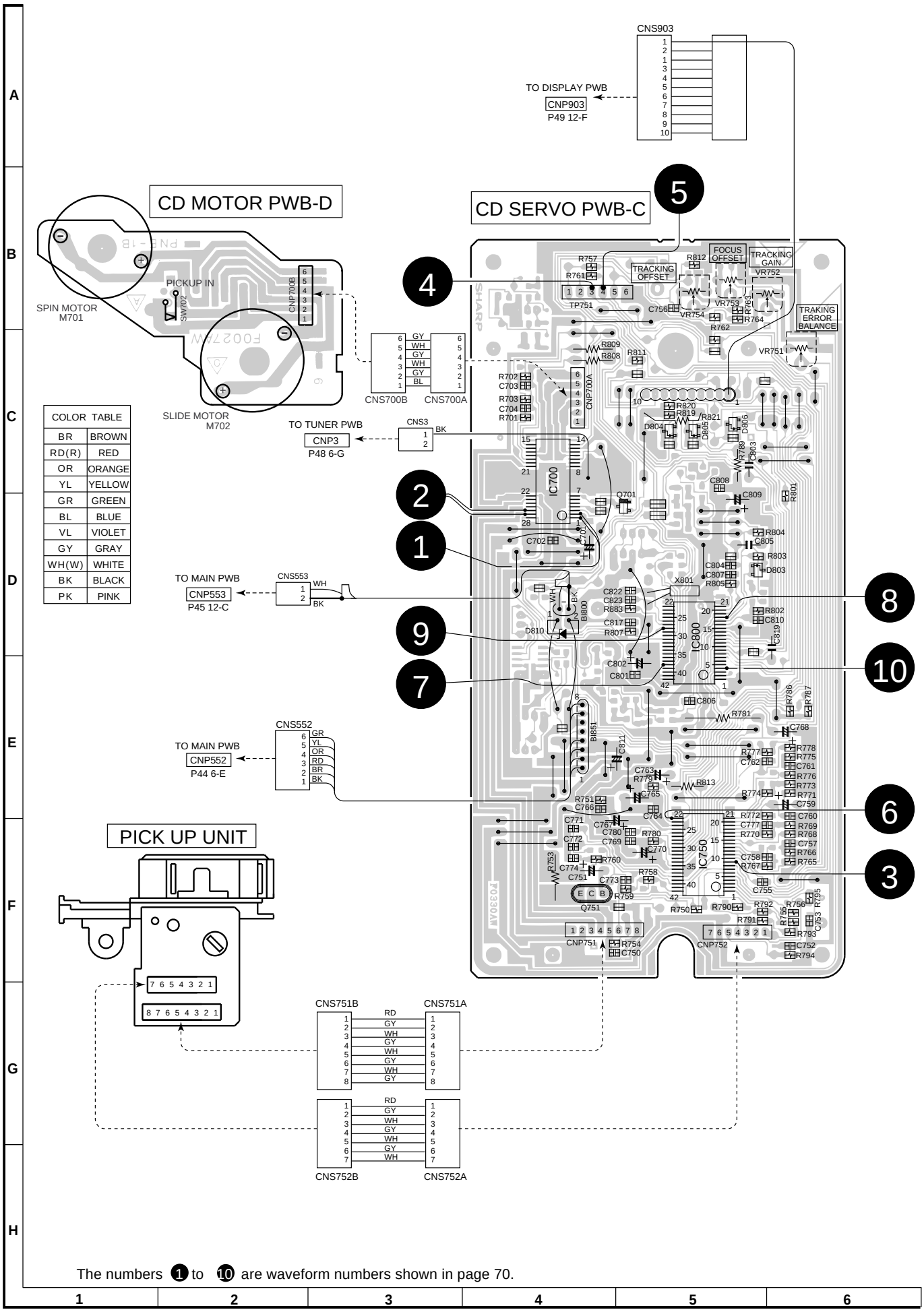


IC800			
PIN NO.	VOLTAGE	21	0V
		22	2.3V
1	5V	23	2.5V
2	0V	24	5V(0V)
3	0V(5V)	25	2.3V(0V)
4	0V(5V)	26	2.2V
5	0V(0V)	27	2.5V
6	0V(5V)	28	2.5V
7	5V	29	0V(2.5V)
8	5V(0.2V)	30	2.5V
9	5V	31	5V
10	5V	32	2.3V
11	5V	33	2.5V
12	0.8V(4.3V)	34	2.5V
13	0.8V(4.3V)	35	2.5V
14	0V	36	2.5V
15	5V	37	0V(2.3V)
16	1.2V	38	0V(1.6V)
17	5V(0V)	39	0V(0.1V)
18	0.2V(2.3V)	40	2.5V
19	0.1V(2.8V)	41	0V
20	0.1V(2.8V)	42	0V

The numbers ❶ to ❿ are waveform numbers shown in page 70.

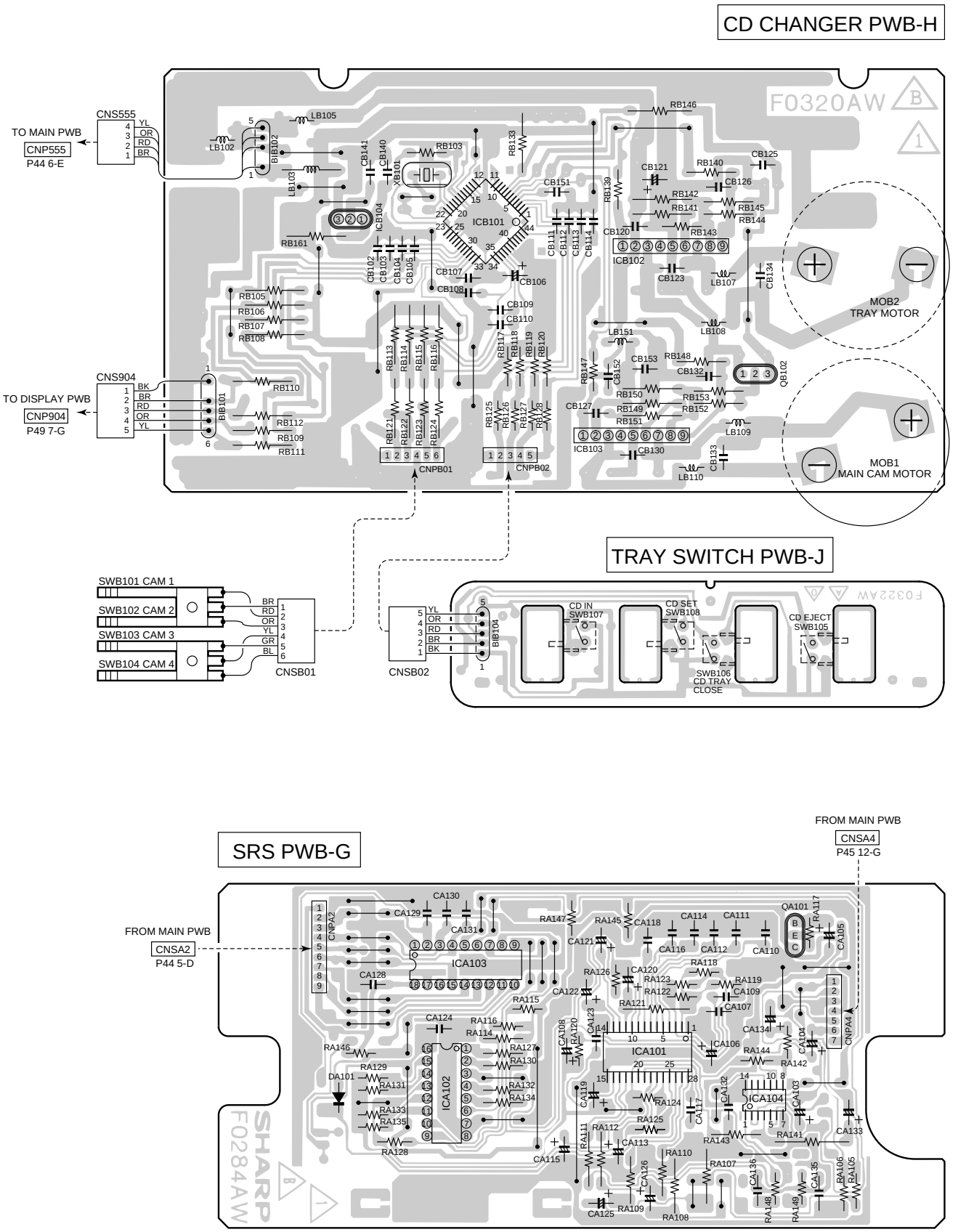
7	8	9	10	11	12

Figure 53 SCHEMATIC DIAGRAM (8/18)



The numbers ❶ to ❿ are waveform numbers shown in page 70.

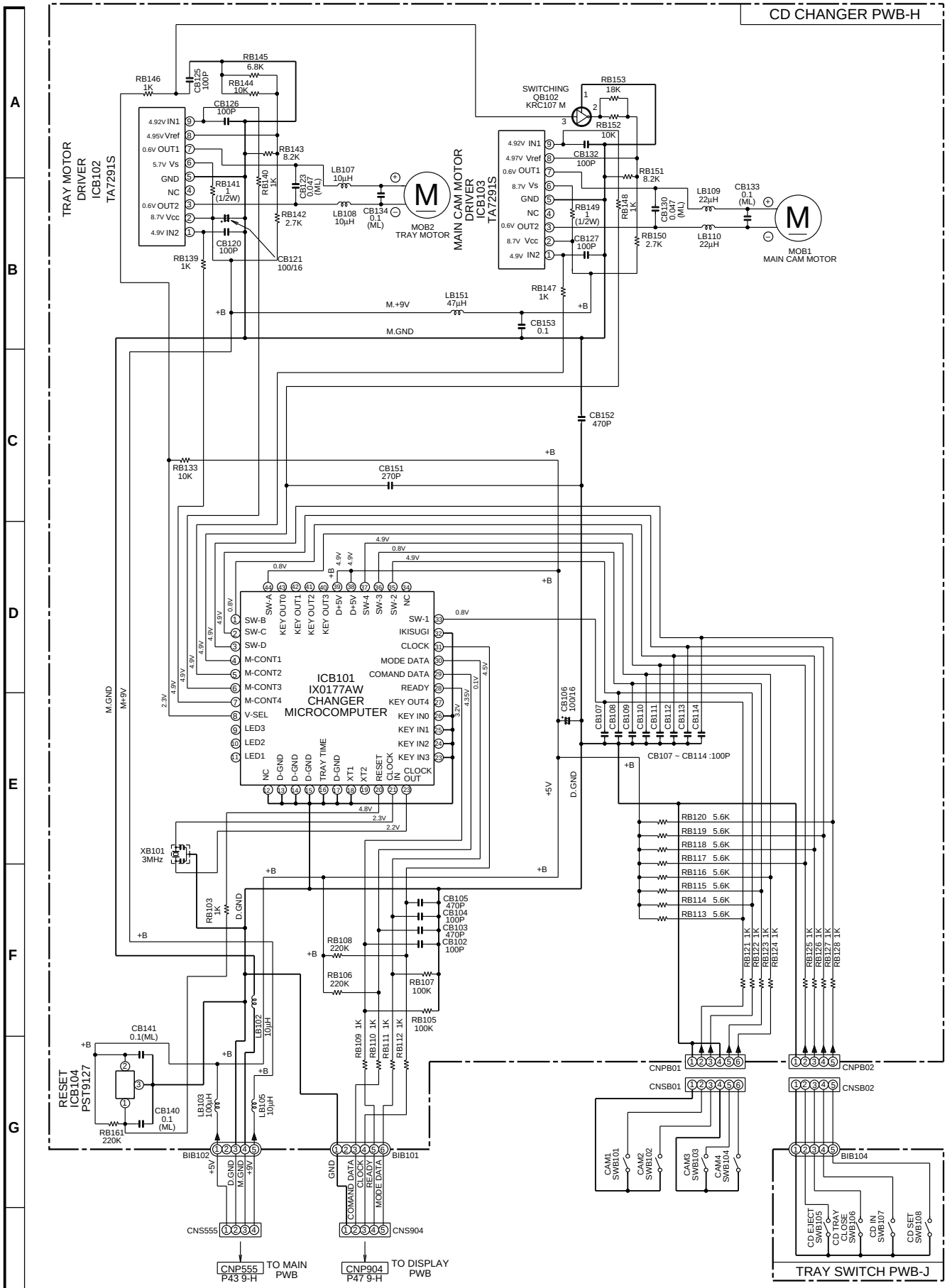
Figure 54 WIRING SIDE OF P.W. BOARD (5/9)



The symbols BIB104/CNSB02, CNSB01, CNPB01, and CNPB02 shown in the PWB diagram are represented as BIB104/CNSB2, CNSB1, CNPB1, and CNSPB2 (without "0") in the parts list.

7	8	9	10	11	12

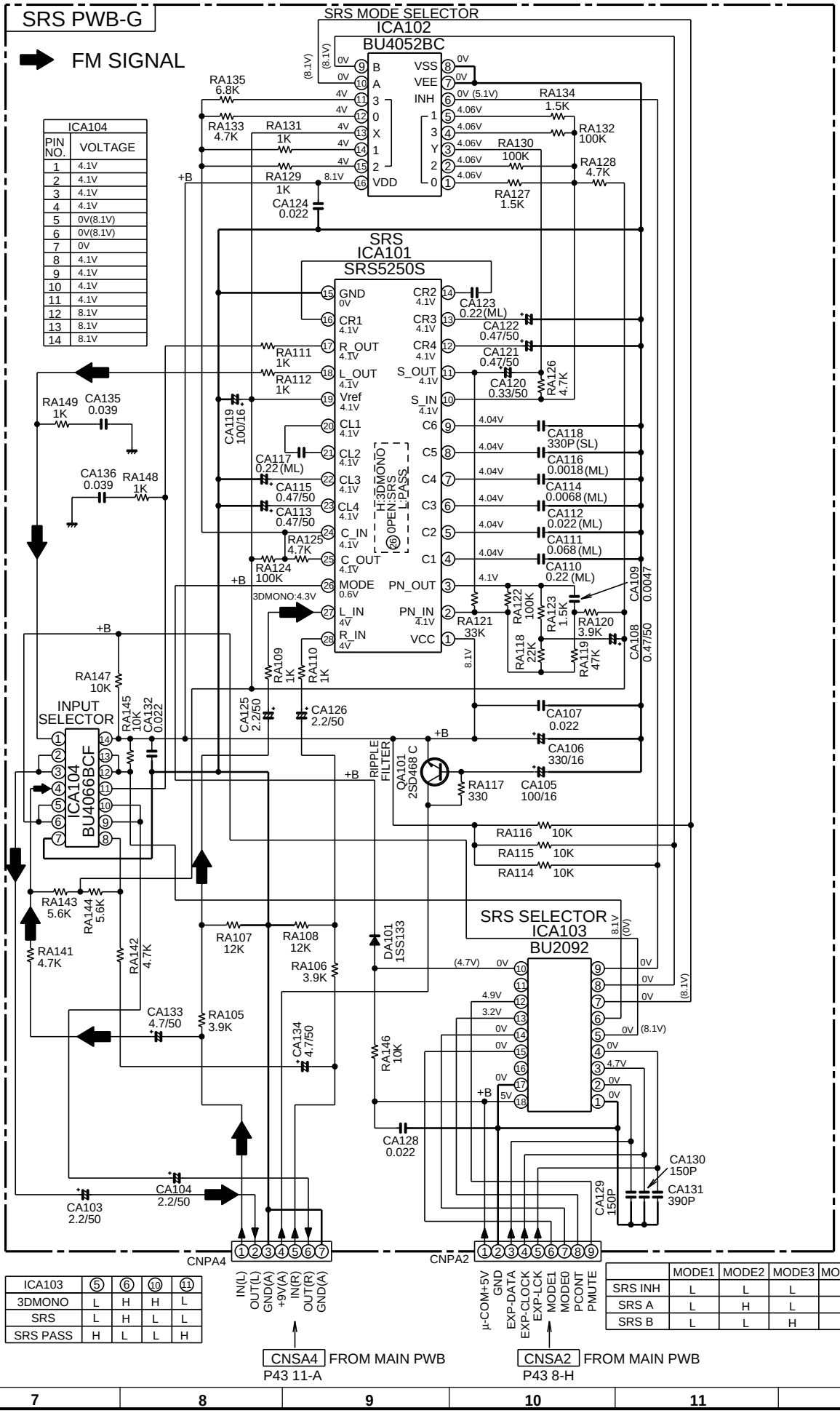
Figure 55 WIRING SIDE OF P.W. BOARD (6/9)



The symbols BIB104/CNSB02, CNSB1, CNPB1, and CNSPB2 shown in the PWB diagram are represented as BIB104/CNSB2, CNSB1, CNPB1, and CNSPB2 (without "0") in the parts list.

NOTES ON SCHEMATIC DIAGRAM can be found on page 69.

Figure 56 SCHEMATIC DIAGRAM (9/18)



ICA104	
PIN NO.	VOLTAGE
1	4.1V
2	4.1V
3	4.1V
4	4.1V
5	0V(8.1V)
6	0V(8.1V)
7	0V
8	4.1V
9	4.1V
10	4.1V
11	4.1V
12	8.1V
13	8.1V
14	8.1V

ICA103	⑤	⑥	⑩	⑪
3DMONO	L	H	H	L
SRS	L	H	L	L
SRS PASS	H	L	L	H

	MODE1	MODE2	MODE3	MODE4	MODE5
SRS INH	L	L	L	L	H
SRS A	L	H	L	H	H
SRS B	L	L	H	H	H

7	8	9	10	11	12

Figure 57 SCHEMATIC DIAGRAM (10/18)

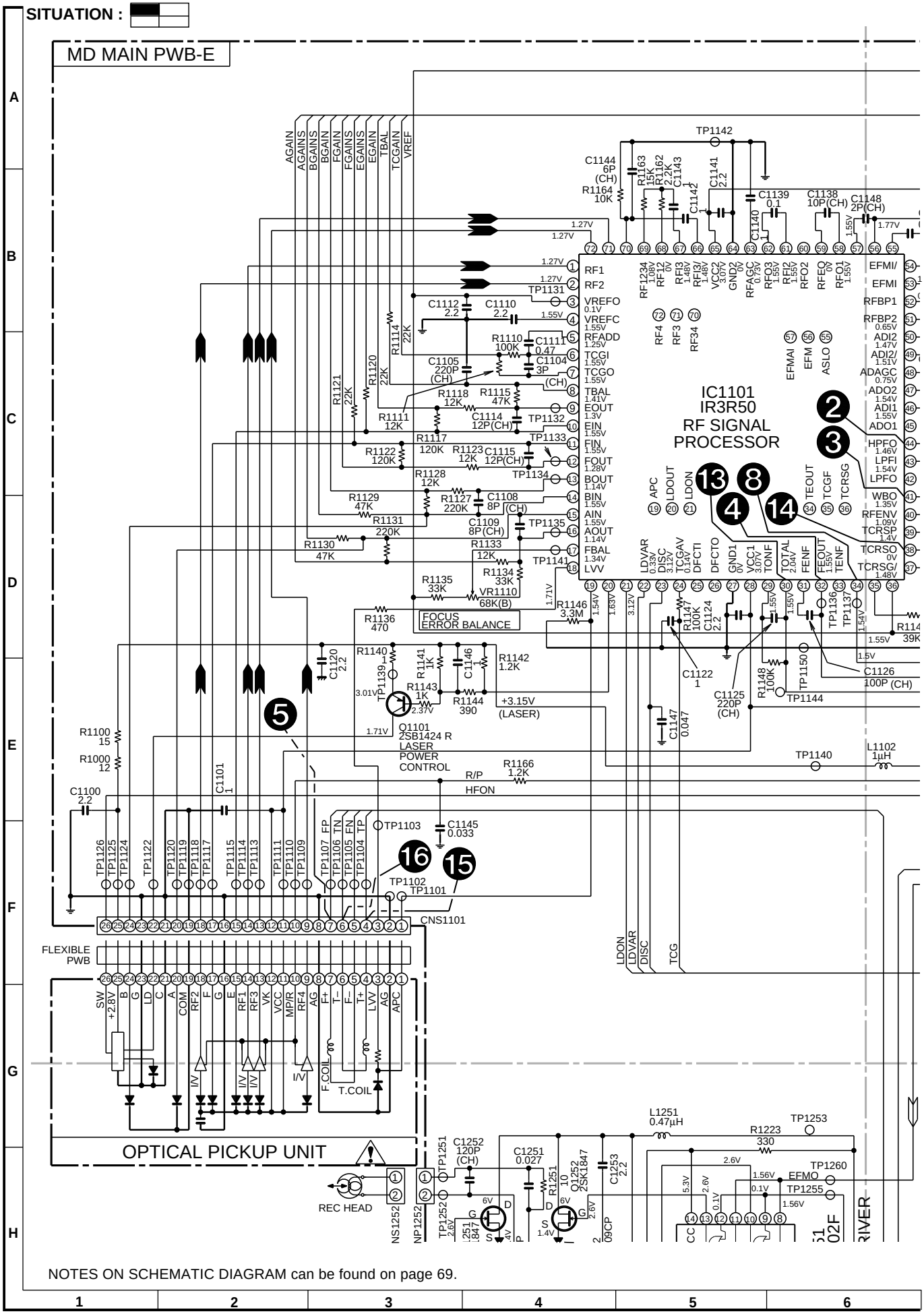
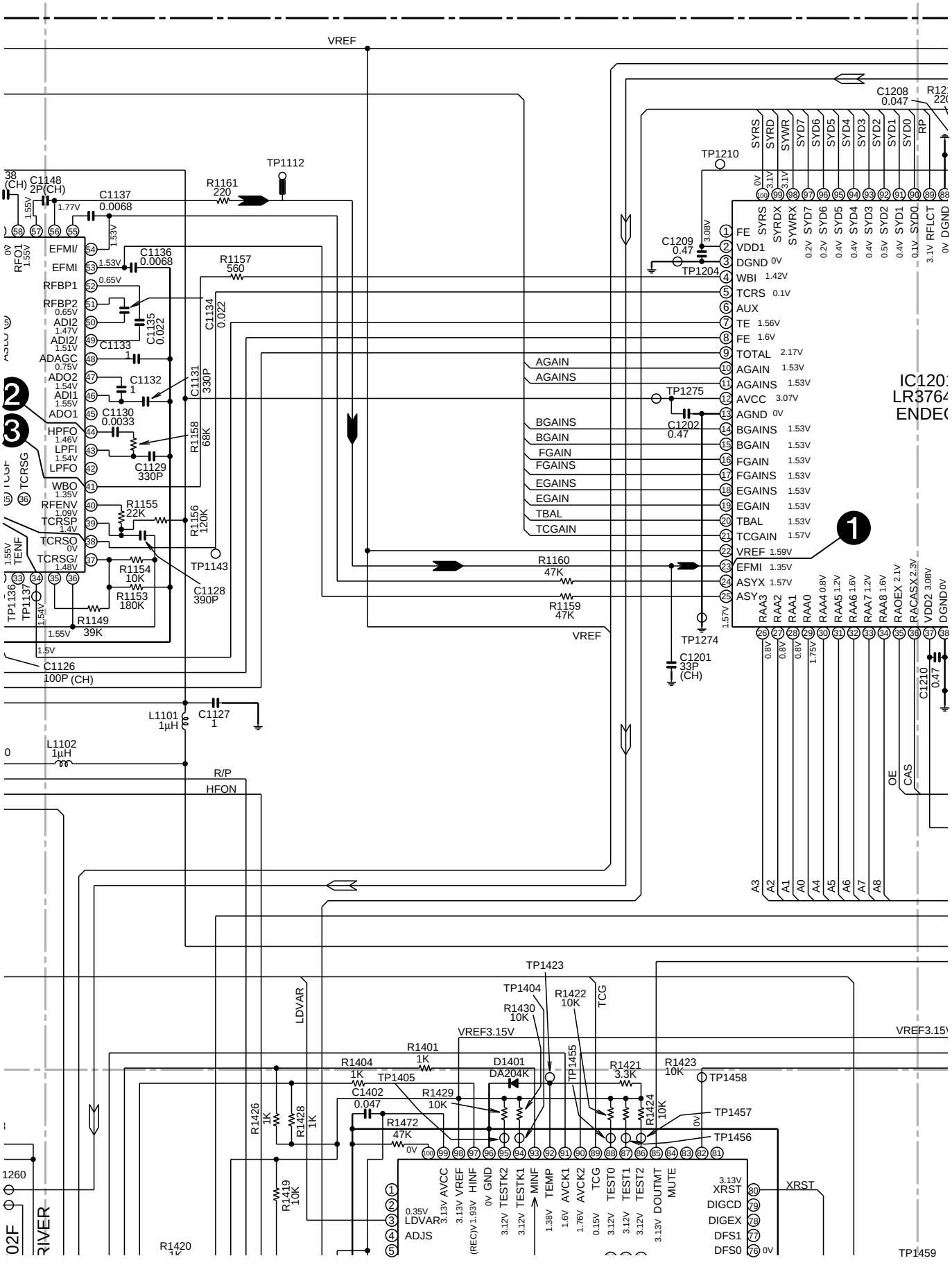


Figure 58 SCHEMATIC DIAGRAM (11/18)



The numbers ❶ to ❷❼ are waveform numbers shown in page 71, 72.

7	8	9	10	11	12

Figure 59 SCHEMATIC DIAGRAM (12/18)

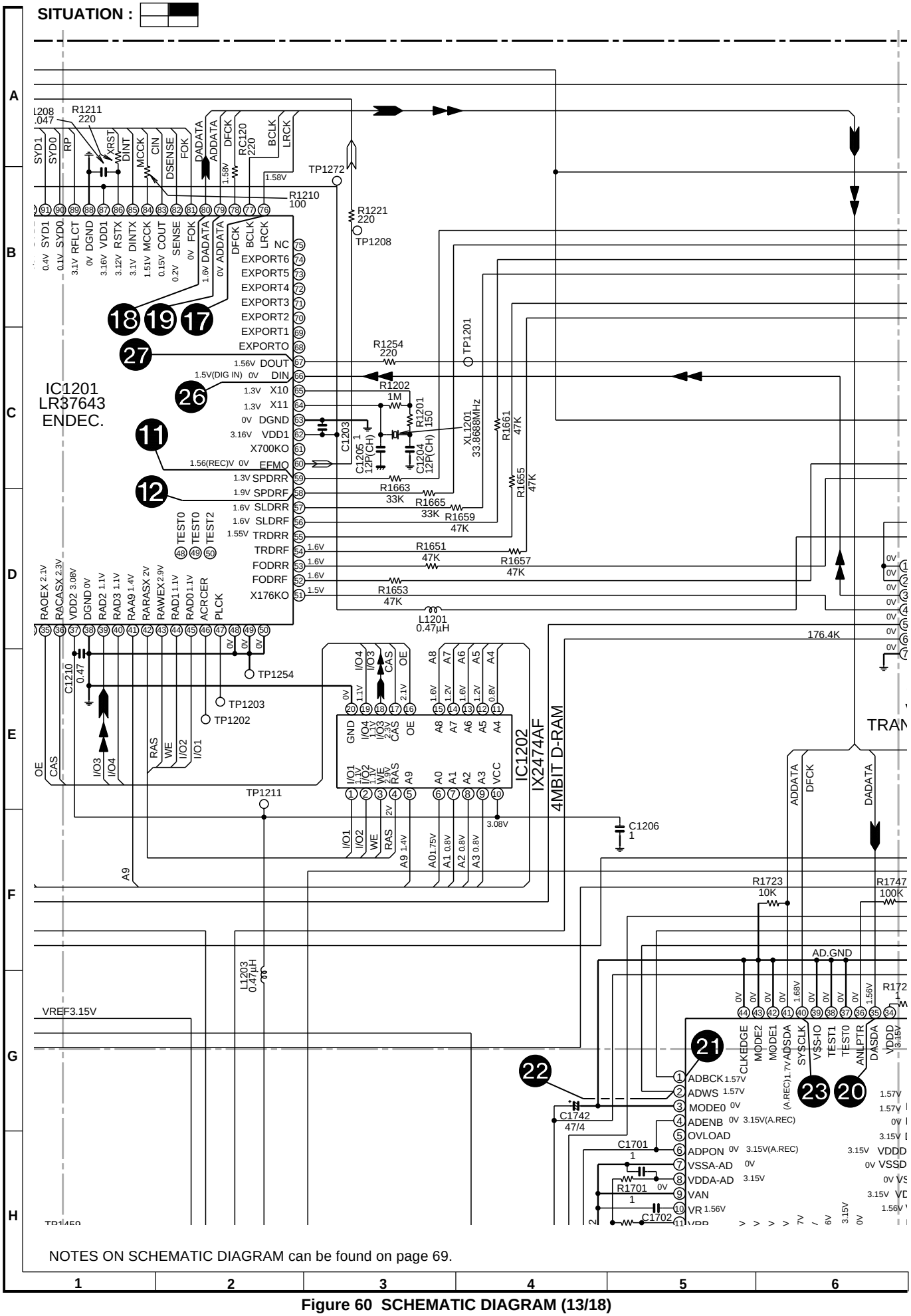
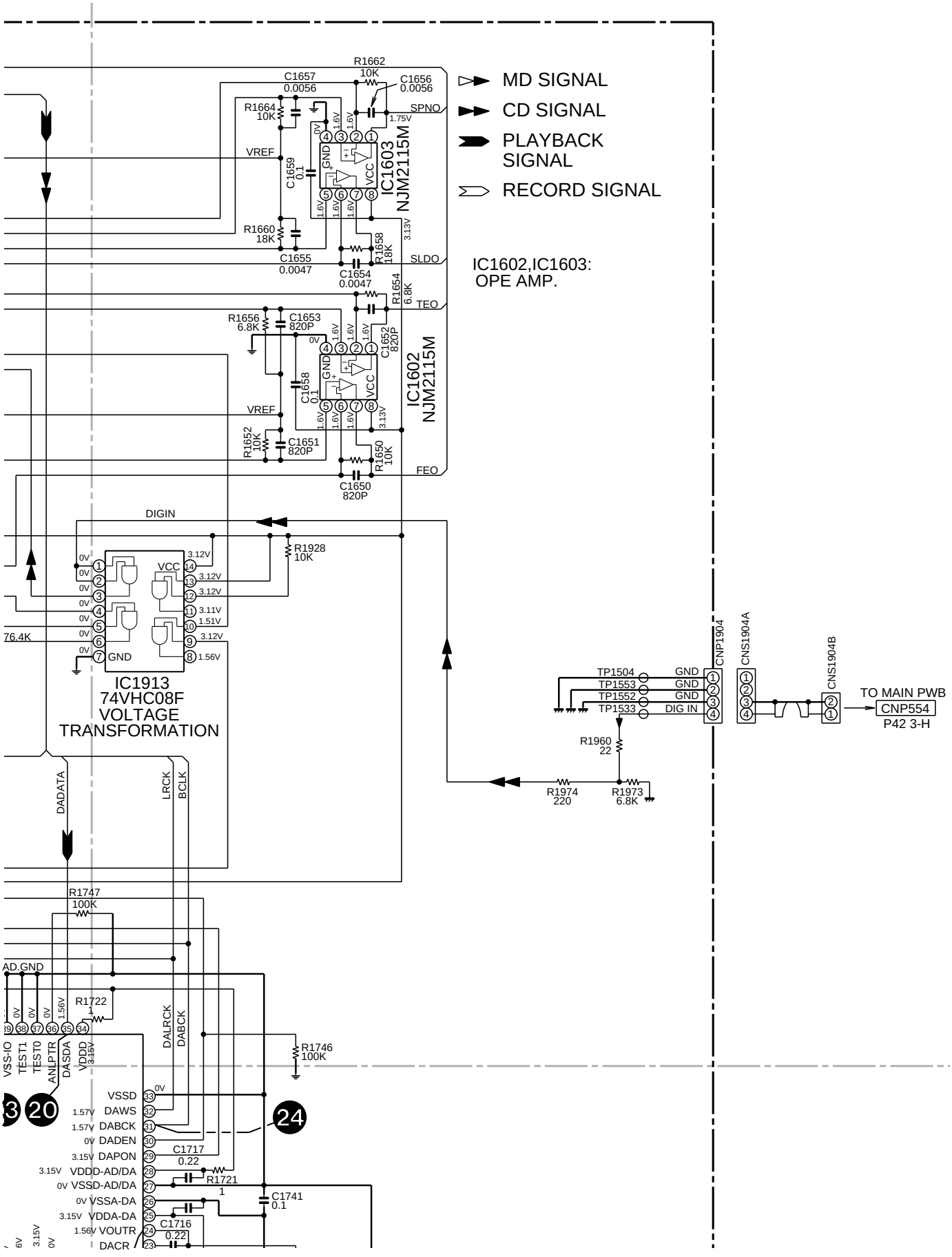


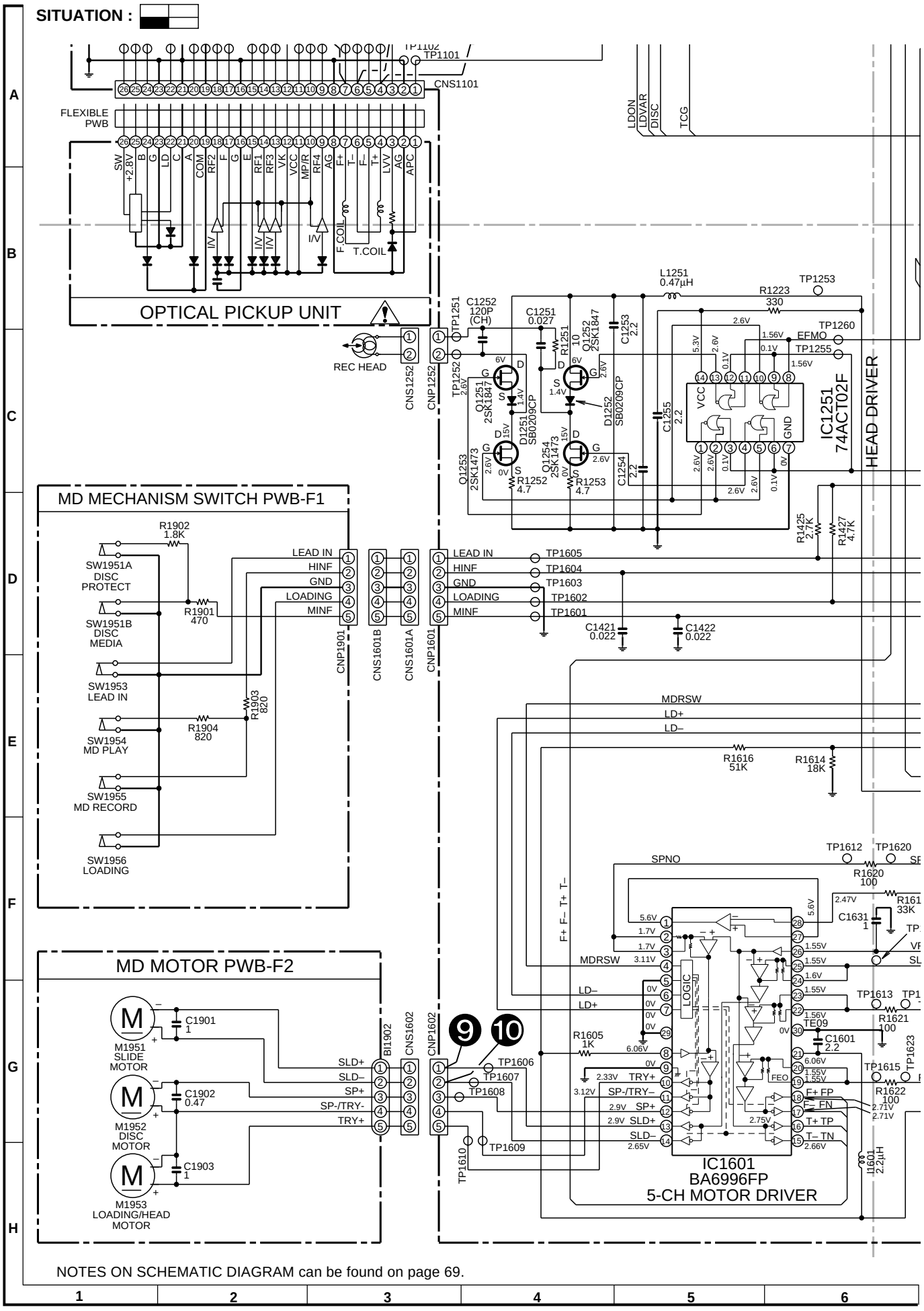
Figure 60 SCHEMATIC DIAGRAM (13/18)



The numbers ❶ to ㉗ are waveform numbers shown in page 71, 72.

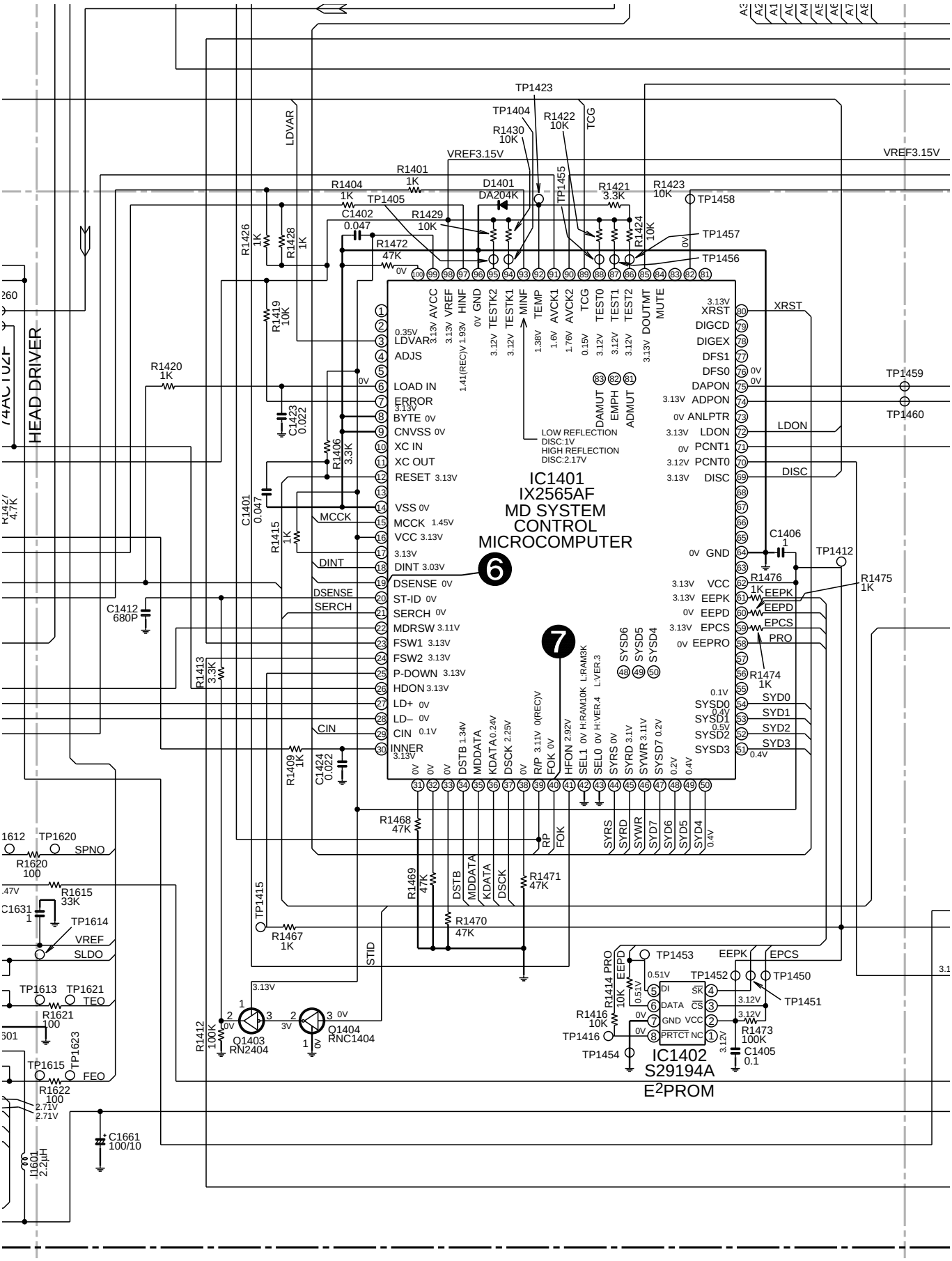
7	8	9	10	11	12

Figure 61 SCHEMATIC DIAGRAM (14/18)



NOTES ON SCHEMATIC DIAGRAM can be found on page 69.

Figure 62 SCHEMATIC DIAGRAM (15/18)



The numbers ❶ to ㉗ are waveform numbers shown in page 71, 72.

7	8	9	10	11	12

Figure 63 SCHEMATIC DIAGRAM (16/18)

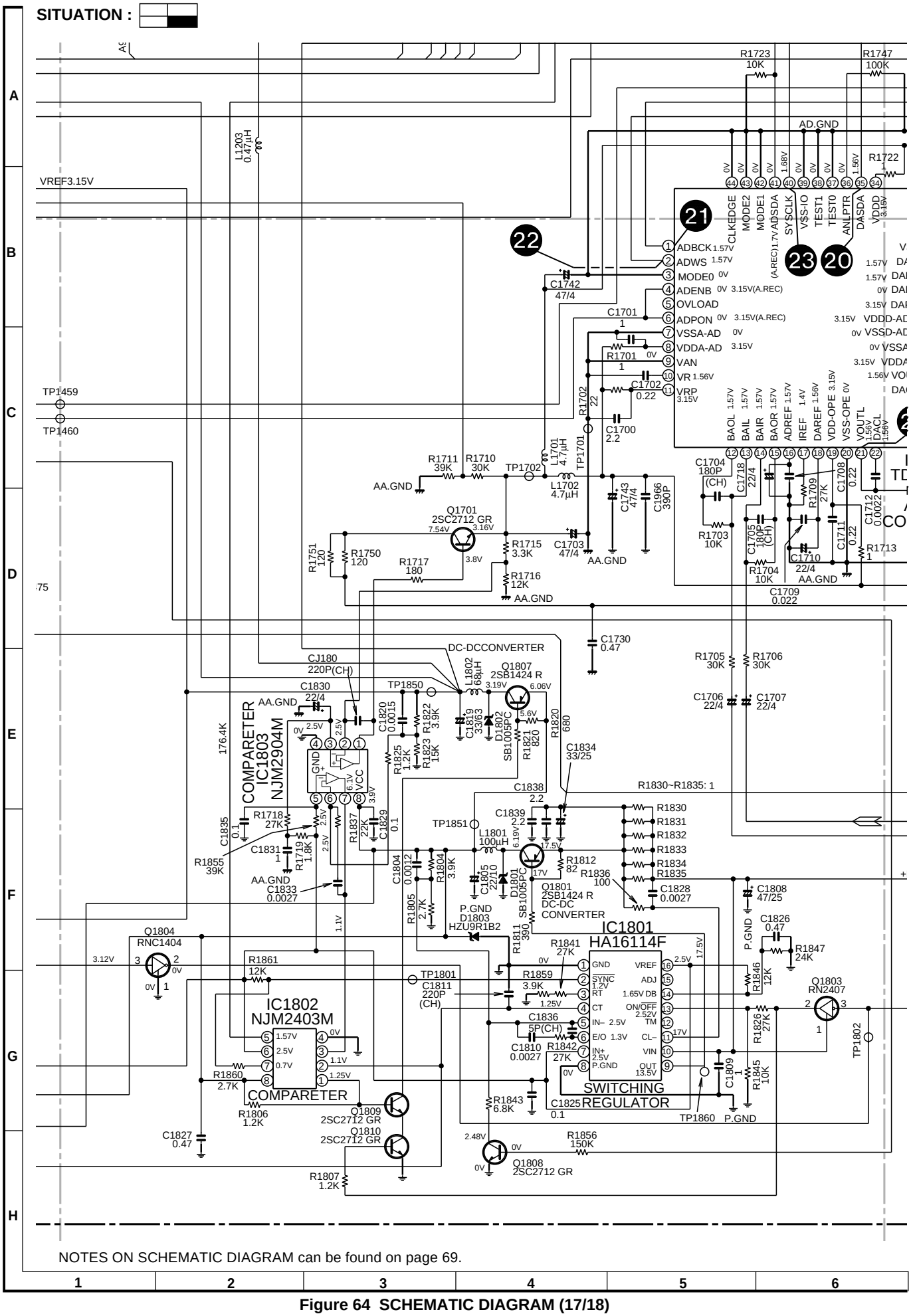
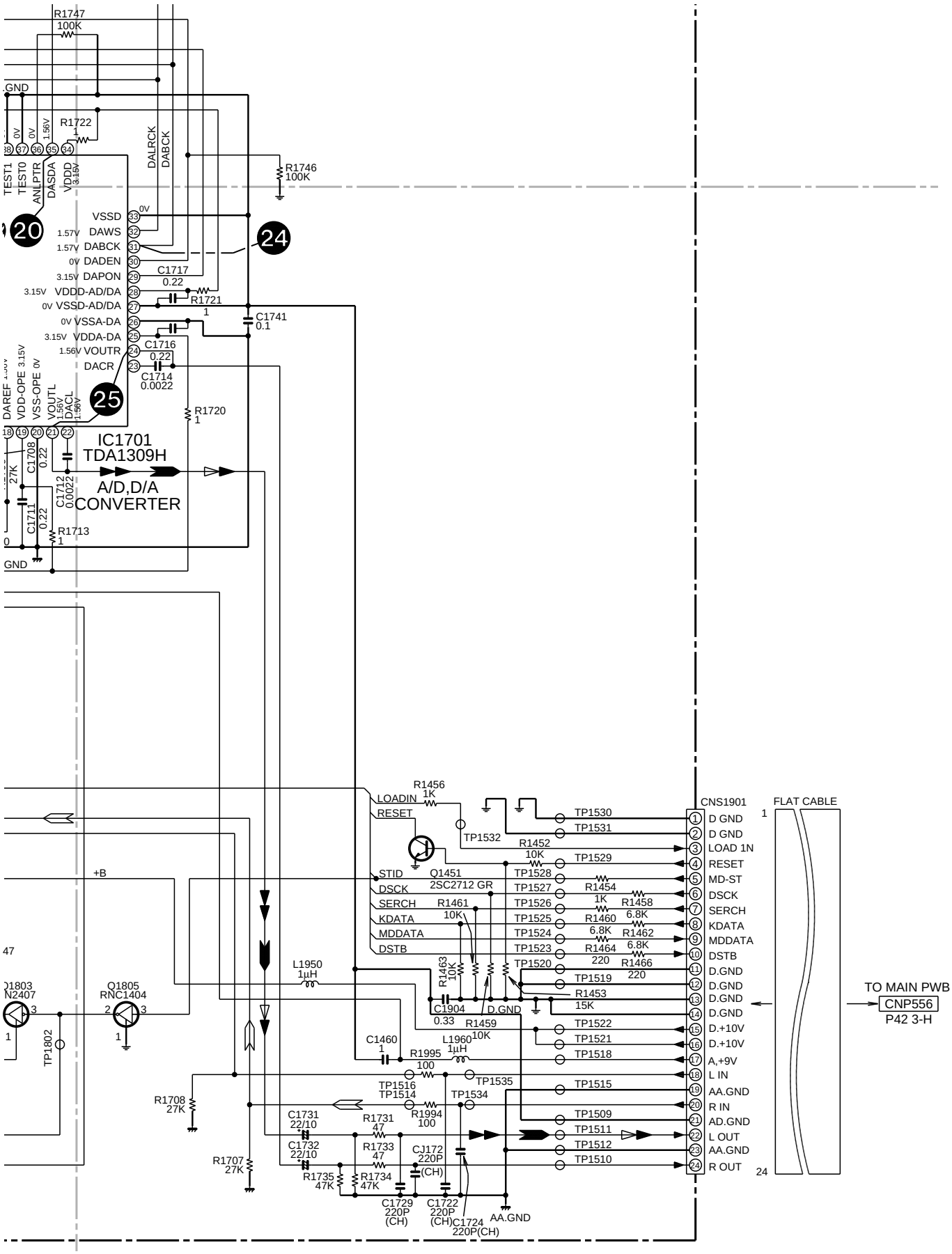


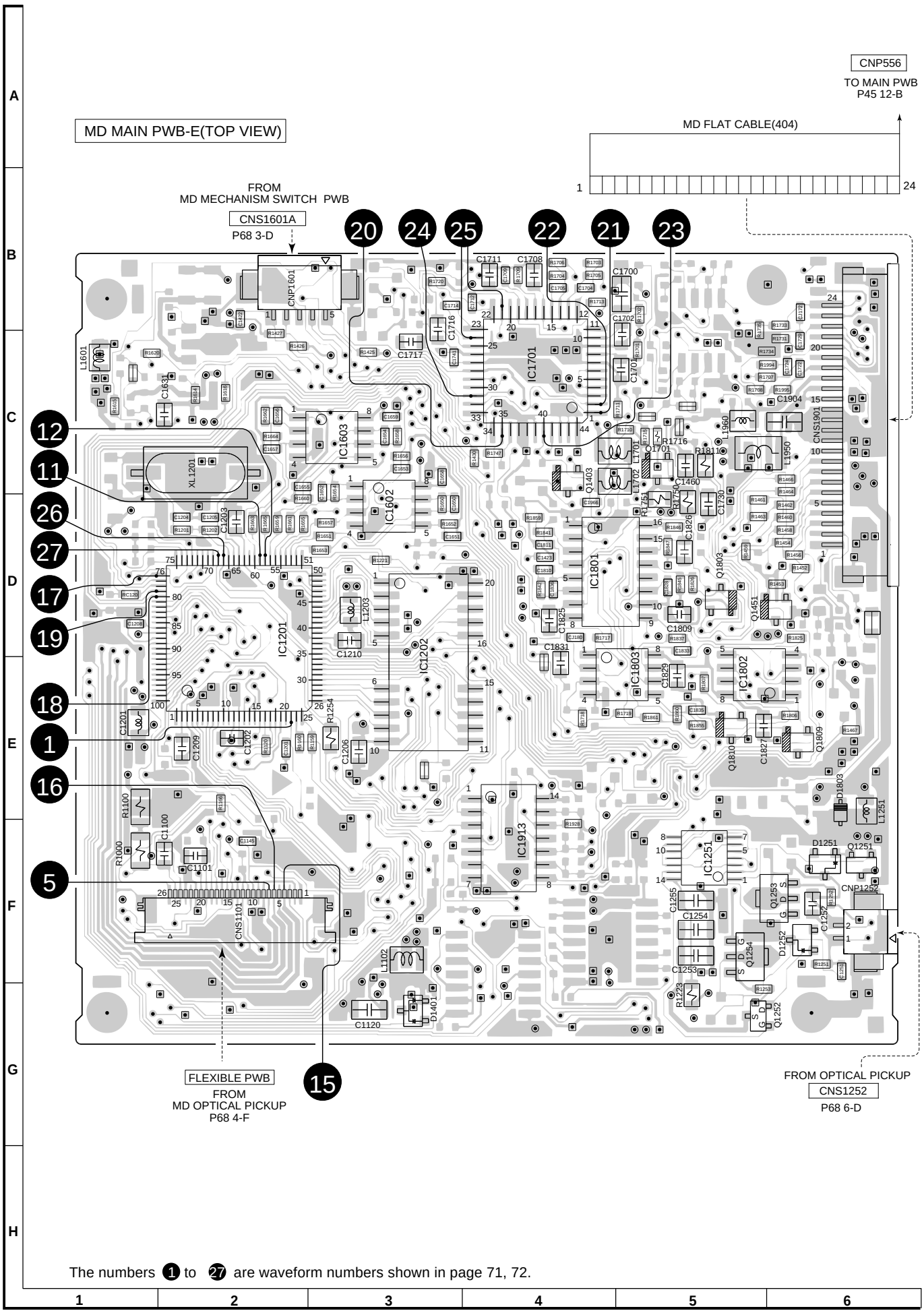
Figure 64 SCHEMATIC DIAGRAM (17/18)



The numbers ❶ to ㉗ are waveform numbers shown in page 71, 72.

7	8	9	10	11	12

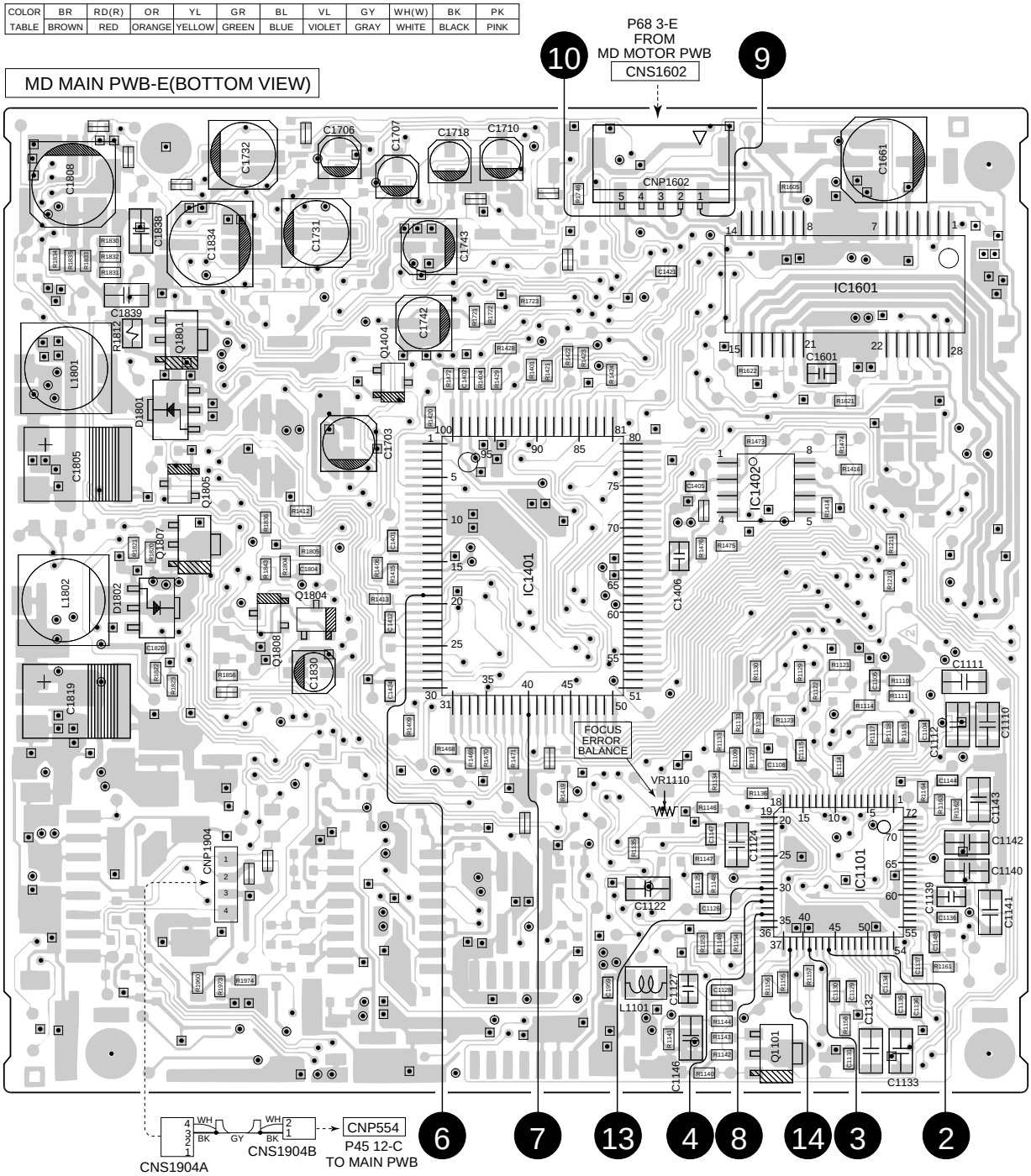
Figure 65 SCHEMATIC DIAGRAM (18/18)



The numbers ❶ to ㉗ are waveform numbers shown in page 71, 72.

Figure 66 WIRIMG SIDE OF P.W.BOARD (7/9)

◉ :Through-hole where the top, bottom and +B patterns are connected.
▣ :Through-hole where the top, bottom and ground patterns are connected.
● :Through-hole where the top and bottom patterns are connected.



7	8	9	10	11	12

Figure 67 WIRIMG SIDE OF P.W.BOARD (8/9)

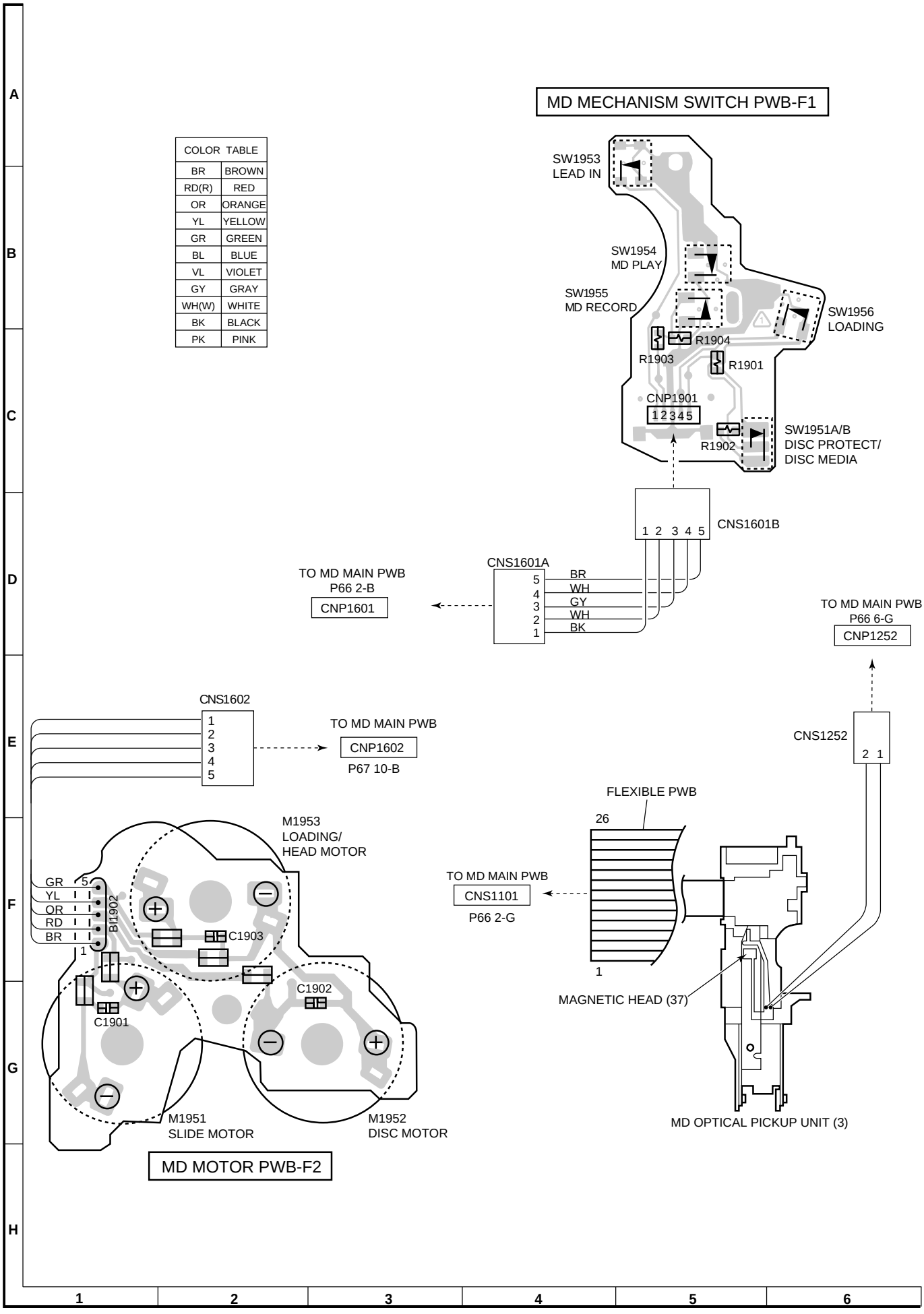


Figure 68 WIRIMG SIDE OF P.W.BOARD (9/9)

NOTES ON SCHEMATIC DIAGRAM

- Resistor:
  To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with “Fusible” is a fuse type.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression “capacitance/withstand voltage” is used.
  (CH), (TH), (RH), (UJ): Temperature compensation
  (ML): Mylar type
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
- Parts marked with “ ⚠ ” (⊏ = = ⊐) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
SW551	RESET	OFF
SW702	PICKUP IN	OFF
SW1951A/B	DISC PROTECT/DISC MEDIA	ON
SW1953	LEAD IN	ON
SW1954	MD PLAY	OFF
SW1955	MD RECORD	OFF
SW1956	LOADING	OFF
SW2001	POWER	OFF
SW2002	CD PLAY/PAUSE	OFF
SW2003	CD STOP	OFF
SW2004	TUNER (BAND)	OFF
SW2005	VOLUME UP	OFF
SW2006	VOLUME DOWN	OFF
SW2008	NAME/TOC EDIT	OFF
SW2009	DISPLAY	OFF
SW2010	TIMER/DELETE	OFF
SW2011	TRACK EDIT	OFF
SW2012	EDIT START	OFF
SW2013	MD PLAY/PAUSE	OFF
SW2014	MD STOP	OFF

REF. NO	DESCRIPTION	POSITION
SW2015	MD EJECT	OFF
SW2016	MD RECORD	OFF
SW2017	TUNING UP	OFF
SW2018	TUNING DOWN	OFF
SW2019	ENTER	OFF
SW2020	JOG DIAL	B
SW2021	CD TRAY 1	OFF
SW2022	CD TRAY 2	OFF
SW2023	CD TRAY 3	OFF
SW2024	CD DISC 1	OFF
SW2025	CD DISC 2	OFF
SW2026	CD DISC 3	OFF
SW2027	SURROUND	OFF
SW2028	SURROUND MODE	OFF
SWB101,102	CAM1, 2	OFF
SWB103,104	CAM3, 4	OFF
SWB105	CD EJECT	OFF
SWB106	CD TRAY CLOSE	CLOSE
SWB107	CD IN	OFF
SWB108	CD SET	OFF

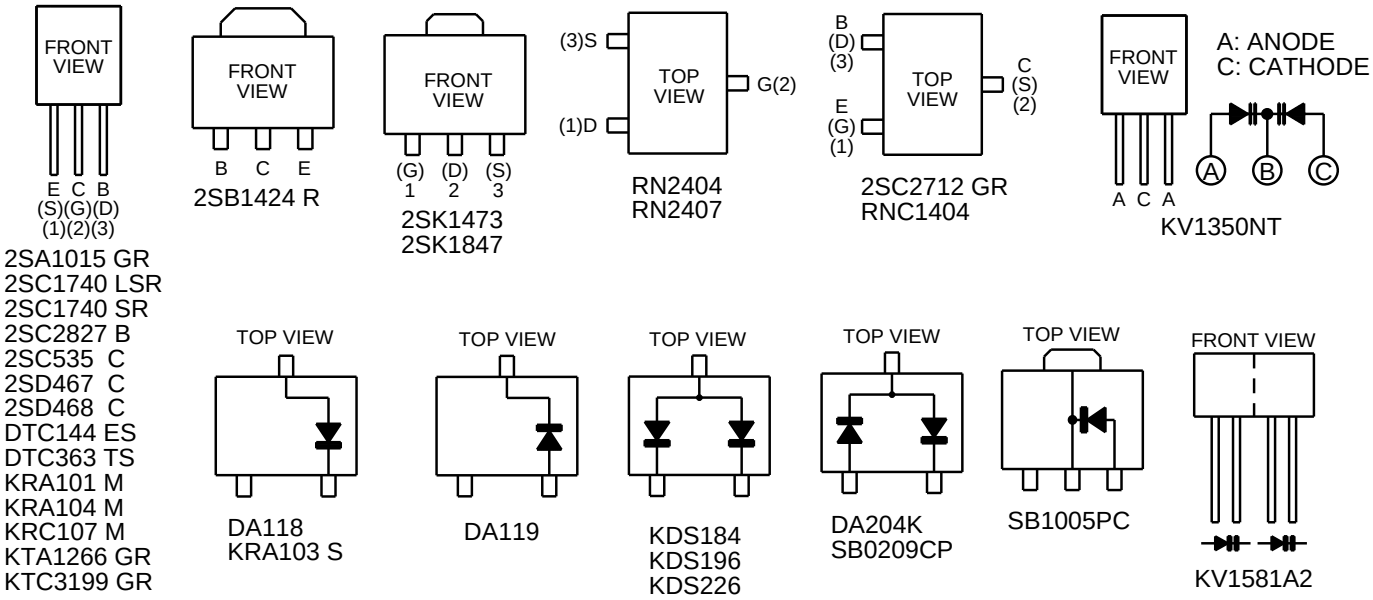


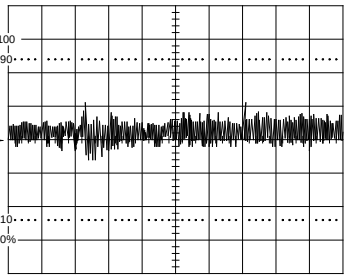
Figure 69 TYPES OF TRANSISTOR AND LED

WAVEFORMS OF CD CIRCUIT

❶ IC700 ①, ②
2V/1mS (DC range)
[Disc playback mode]

Potential difference 0V

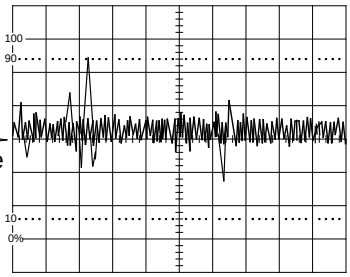
Disc free from flaw



Disc having flaw
(the same as above)

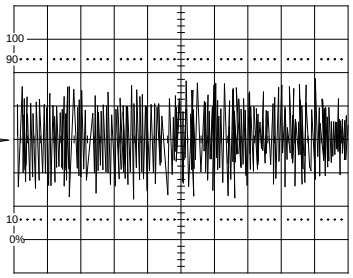
Potential difference 0V

If a flaw exists, pulse-like noise appears as shown right.
Noise appears also in output of ❷ and TE or FE signal.



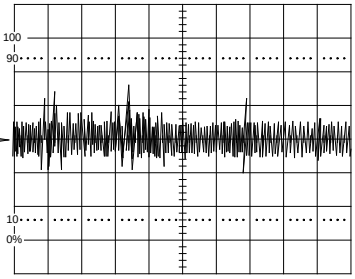
❷ IC700 ⑪, ⑫
0.5V/0.5mS
(Dc range)
[Disc playback mode]

Potential difference 0V

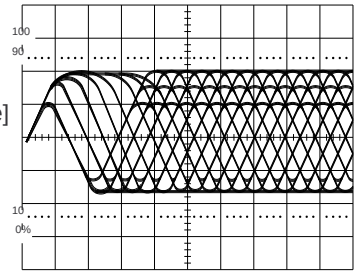


❸ IC750 ⑨
50mV/2mS
[Disc playback mode]

1/2VCC

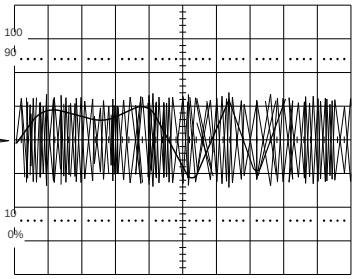


❹ TP751 ③
0.2V/0.5µS
(AC range)
[Disc playback mode]



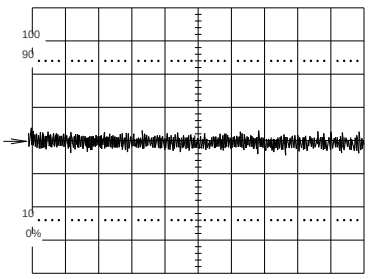
❺ TP751 ④
0.2V/1mS
(DC range)
In test mode 3

1/2VCC



0.2V/1mS (DC range)
[Disc playback mode]

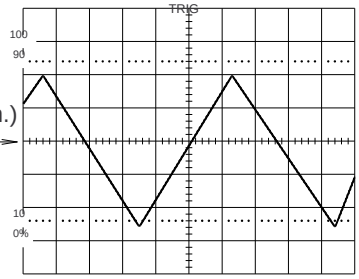
1/2VCC



❻ IC750 ㉒
In test mode 2
(disc is not loaded.
Lens is moved up and down.)
1/2VCC

200mV/0.5S (DC range)

* Observation with the aid of storage oscilloscope
Only the triangular wave and luminous dot shown right are observed on oscillograph.



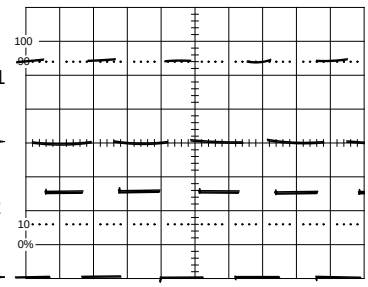
❼ IC800 ㊲, ㊳
Disc motor
PWM output
0.2V/10µS
(DC range)
[Disc playback mode]
(Use the 10:1 probe.)

PWM1

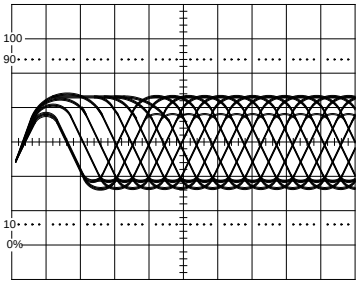
GND

PWM2

GND

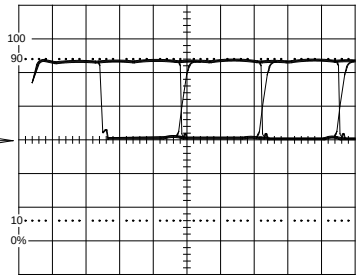


❽ IC800 ⑲
20mV/0.5µS
(AC range)
[Disc playback mode]
(Use the 10:1 probe.)



❾ IC800 ㉘
2V/0.1µS (DC range)
[Disc playback mode]

GND



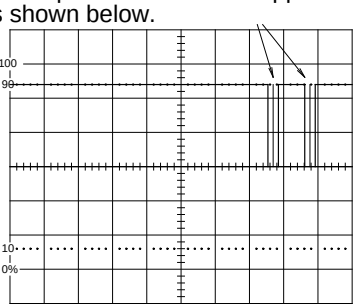
* If disc has flaw or during track search pulse-like "L" level appears as shown below.

❿ IC800 ④
2Vdiv (DC range)

Playback mode, 4.8V

Stop mode, 0V

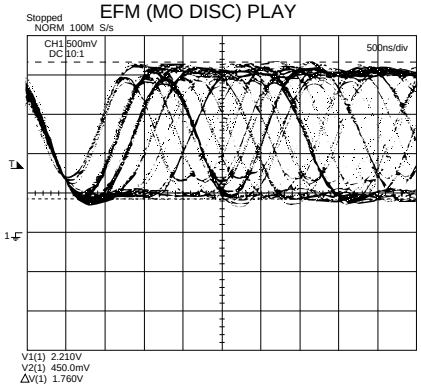
When the disc rotates and the HF signal is synchronized with the IC internal signal, H level is set.



WAVEFORMS OF MD CIRCUIT

EFM (MO DISC) PLAY

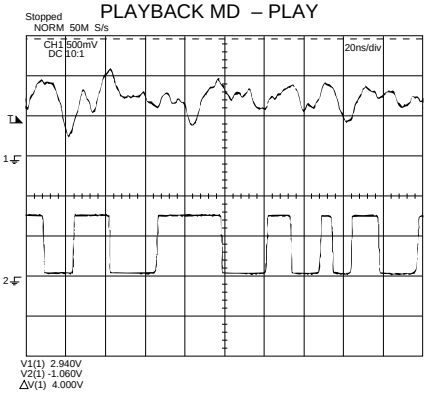
1 TP1112 (EFM)



PLAYBACK MD – PLAY

2 HPFO

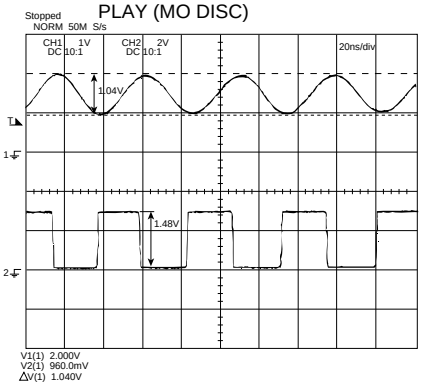
3 WBO



PLAY (MO DISC)

2 HPFO

3 WBO



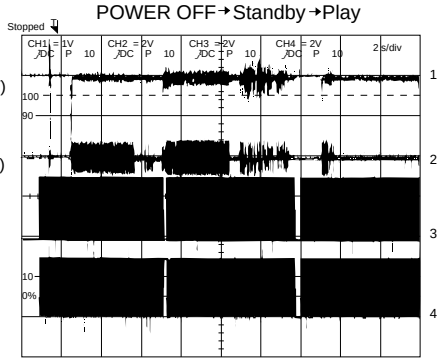
POWER OFF→Standby→Play

4 TP1136 (FEOUT)

8 TP1137 (TEOUT)

11 SPDRR

12 SPDRF



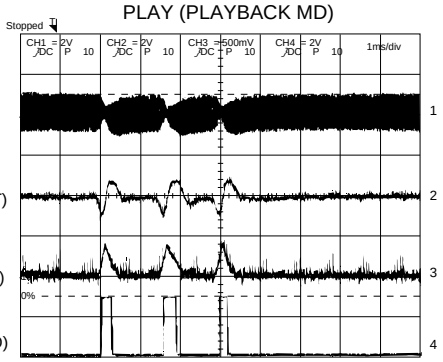
PLAY (PLAYBACK MD)

1 TP1112 (EFM)

8 TP1137 (TEOUT)

13 TP1144 (TOTAL)

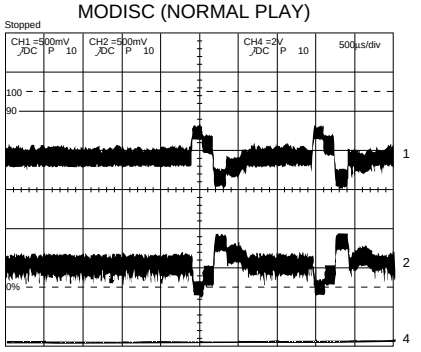
14 TP1143 (TCRSO)



MODISC (NORMAL PLAY)

15 TP1104 (T+)

16 TP1106 (T-)



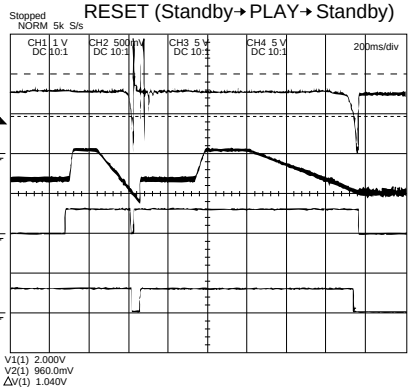
RESET (Standby→PLAY→Standby)

4 TP1136 (FEOUT)

5 TP1107 (F+)

6 (DSENSE)

7 (FOK)



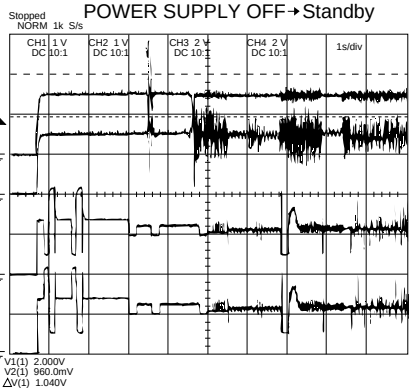
POWER SUPPLY OFF→Standby

4 TP1136 (FEOUT)

8 TP1137 (TEOUT)

9 TP1601 (SLD+)

10 TP1607 (SLD-)

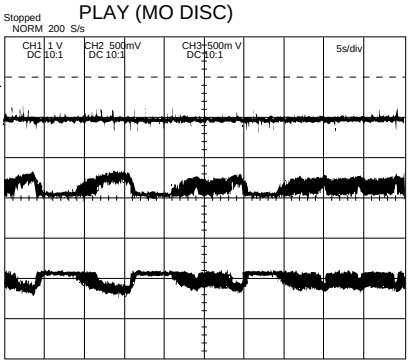


PLAY (MO DISC)

8 TP1137 (TE OUT)

9 TP1606 (SLD+)

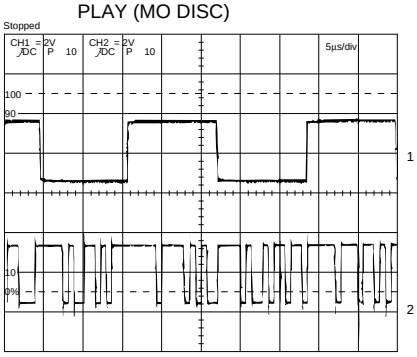
10 TP1607 (SLD-)



PLAY (MO DISC)

17 LRCK

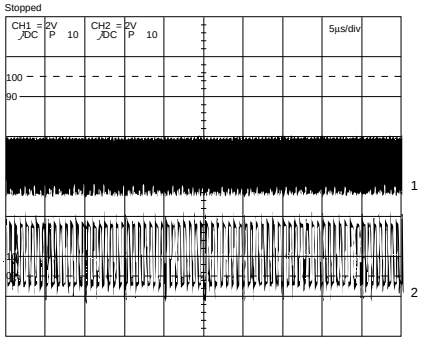
18 DADATA



PLAY

23 SYSCLK

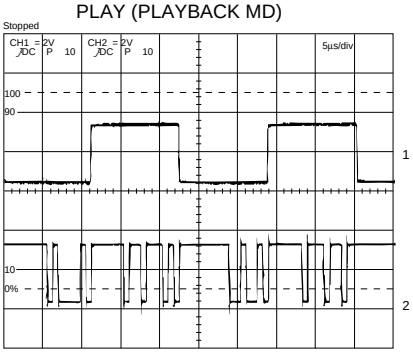
24 DABCK



PLAY (PLAYBACK MD)

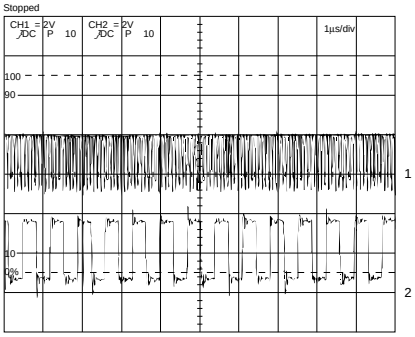
17 LRCK

18 DADATA



23 SYSCLK

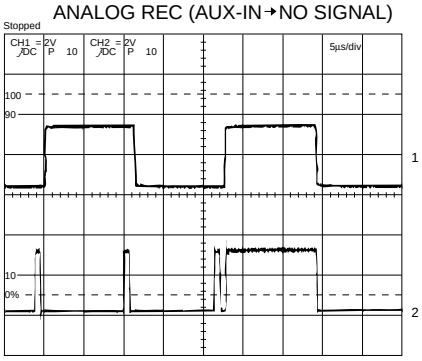
24 DABCK



ANALOG REC (AUX-IN→NO SIGNAL)

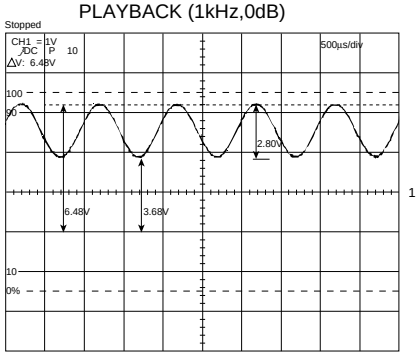
17 LRCK

19 ADDATA



PLAYBACK (1kHz,0dB)

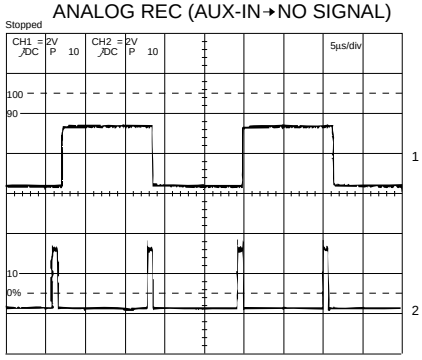
25 VOUTL
VOUTR



ANALOG REC (AUX-IN→NO SIGNAL)

17 LRCK

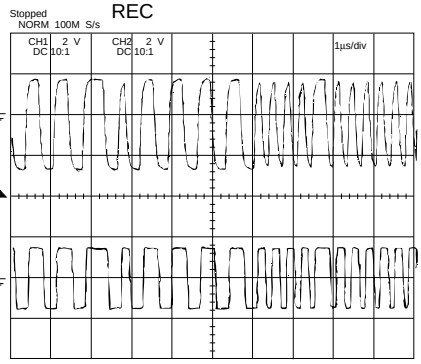
19 ADDATA



REC

26 DIN

27 DOUT

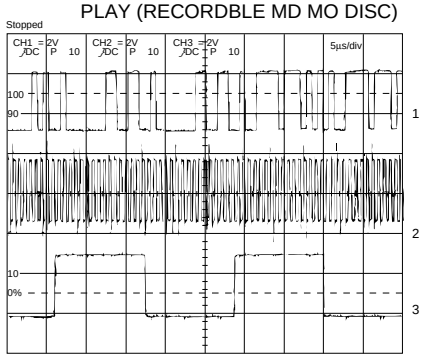


PLAY (RECORDBLE MD MO DISC)

20 DASDA

21 ADBCK

22 ADWS

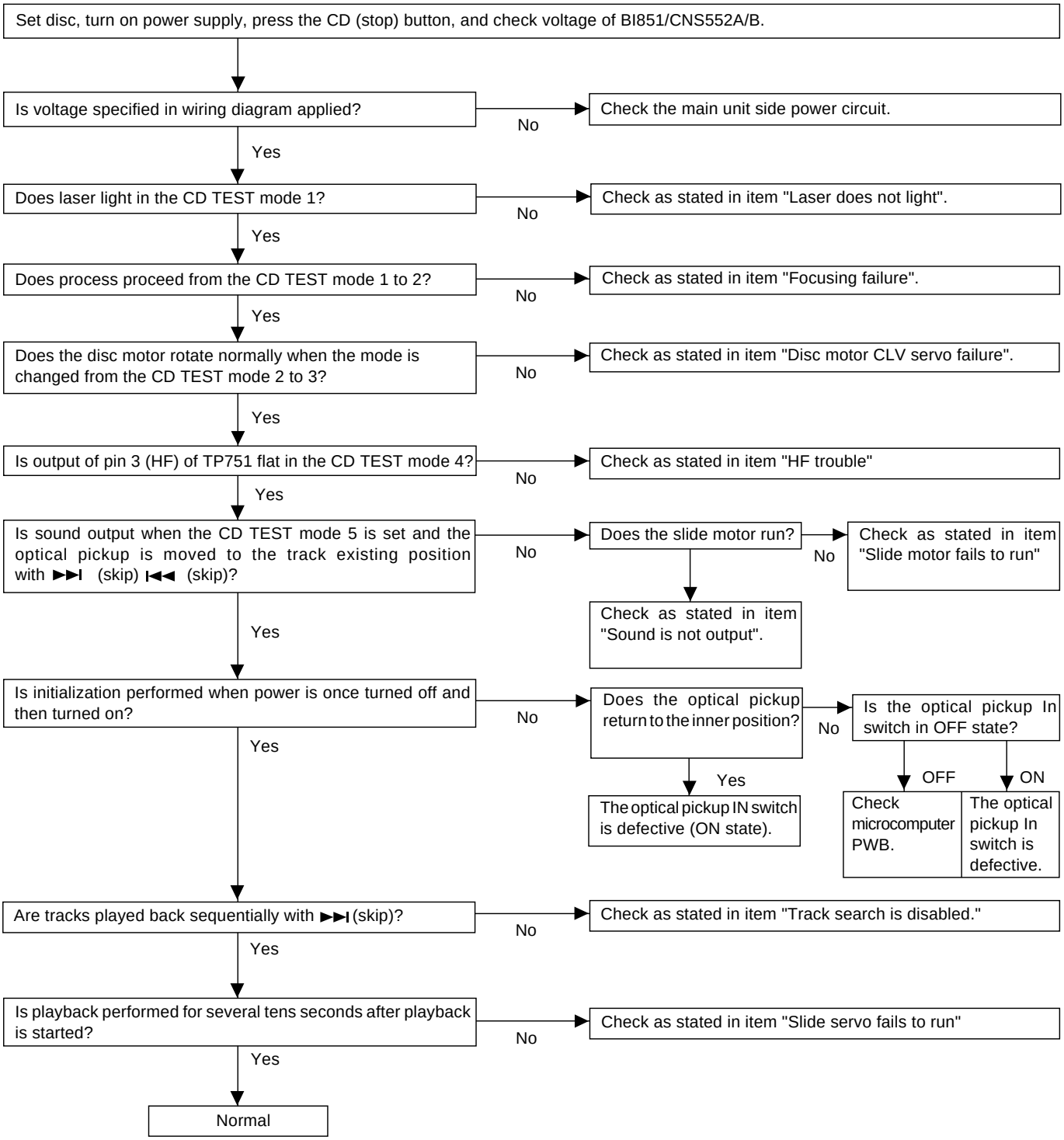


TROUBLE SHOOTING (CD SECTION)

CD fails to operate

If the objective lens of optical pickup is contaminated, CD may fail to operate. At first clean the objective lens, and check playback operation. If CD does not operate persistently, check as follows.
If dust or foreign substance is accumulated on the pickup lens, playback is disturbed and TOC (content of item) is not displayed. Before adjusting check whether the lens is clean. If the lens is contaminated, treat it as follows.

Turn off power supply, impregnate the lens cleaning paper with a small quantity of isopropyl alcohol, and gently wipe the lens with it with due care so that the lens is not damaged.
At this time do not contact directly the lens with our finger.


Set disc, turn on power supply, press the CD (stop) button, and check voltage of BI851/CNS552A/B.
Is voltage specified in wiring diagram applied?
No
Check the main unit side power circuit.
Yes
Does laser light in the CD TEST mode 1?
No
Check as stated in item "Laser does not light".
Yes
Does process proceed from the CD TEST mode 1 to 2?
No
Check as stated in item "Focusing failure".
Yes
Does the disc motor rotate normally when the mode is changed from the CD TEST mode 2 to 3?
No
Check as stated in item "Disc motor CLV servo failure".
Yes
Is output of pin 3 (HF) of TP751 flat in the CD TEST mode 4?
No
Check as stated in item "HF trouble"
Yes
Is sound output when the CD TEST mode 5 is set and the optical pickup is moved to the track existing position with ▶▶I (skip) I◀◀ (skip)?
No
Does the slide motor run?
No
Check as stated in item "Slide motor fails to run"
Check as stated in item "Sound is not output".
Yes
Is initialization performed when power is once turned off and then turned on?
No
Does the optical pickup return to the inner position?
No
Is the optical pickup In switch in OFF state?
Yes
OFF
ON
The optical pickup IN switch is defective (ON state).
Check microcomputer PWB.
The optical pickup In switch is defective.
Yes
Are tracks played back sequentially with ▶▶I (skip)?
No
Check as stated in item "Track search is disabled."
Yes
Is playback performed for several tens seconds after playback is started?
No
Check as stated in item "Slide servo fails to run"
Yes
Normal

• Laser does not light

Is 5V applied to the pin 13 CD LD ON terminal of IC901?
- No → IC901 is defective.
- Yes ↓

Is +4.0V applied to the emitter of Q751?
- No → Is +5V applied to the C751 side of R753?
  - Yes → R753 is defective.
  - Yes ↓ Check the pin 2 of BI851/CNS552A/B, and check +5V line of SERVO.
- Yes ↓

Is +1.8V applied to the collector of Q701.
- No → Is +3.2V applied to the base of Q751?
  - No → Check between the base of Q751 and the pin 6 of IC750.
  - Yes ↓ Q751 is defective.
- Yes ↓

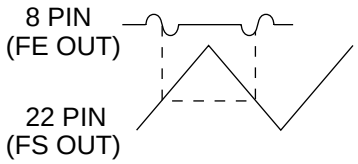
Is +1.8V applied to the pin 8 of CNP751?
- No → PWB pattern breakage between Q751 and pin 8 of CNP751
- Yes ↓

Check CNP751. If it is normal, the optical pickup is defective.

• Focusing failure

Remove disc, and check whether the optical pickup lens moves up and down.
- No → Check as stated in item "Triangular wave for focus servo is not output".
- Yes ↓

Set disc, and check whether the following waveform appears on the pin 8 of IC750.
- No → Set disc, and check whether the following waveform appears on the pin 8 of IC750.
- Yes ↓



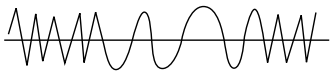
IC750 is defective.

• HF trouble

Does output (tracking error signal) appear on the pin 4 of TP751 in the CD TEST mode 3?

Abnormal → Check CNP751. If it is normal, the optical pickup is defective.

Normal



Is the tracking gain adjusting VR752 set to minimum?

Yes → Adjust again tracking gain.

No

Does tracking output appear on the pin 17 of IC750 in the CD TEST mode 4?

No → Check the peripheral parts of IC750. If it is normal, IC750 is defective.

Yes

Does output appear between the pins 26 and 27 of IC700?

No → Check the peripheral parts of IC700. If it is normal, IC700 is defective.

Yes

Check connection of optical pickup wire between IC700 and CNP751. If it is normal, the optical pickup is defective.

• Track search failure

Set the TEST mode, and check whether the slide motor is started with ►►I (skip) I◄◄ (skip).

No → Check as stated in item "Slide motor fails to run".

Yes

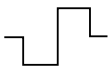
Is the following waveform output to the pin 29 of IC750 in track jump state?

No → IC750 is defective.

* The sate where the following waveform is output to the pin 17 of IC750 is referred to as track jump state.

Yes

Kick Pluse

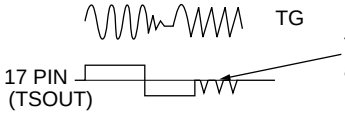


Synchronization is set on the pin 28 (JPI) of IC750.

Is the following waveform output to the pin 17 of IC750 in track search mode?

No → IC750 is defective.

Yes



Check the display PWB.

• Triangular wave for focus servo is not output.

Is +5V applied to the pin 36 of IC750?
- No → +5V line of IC750 is defective.
- Yes ↓

Is triangular wave observed on the pin 22 of IC750?
- No → s the following triangular waveform observed?
  - No → Check the pins 34 and 35 of IC750, R780 and C769. If OK, IC750 is defective. (Check also the line of pins 30, 31, and 33 of IC901.)
  - Yes (the wave swings once to + side.) → Check the periphery of pin 23 of IC750. If it is normal, IC750 is defective.
- Yes ↓ (1~2 sec.)

Is triangular wave input into the pin 3 of IC700? (Waveform shown above)
- No → Signal line connection failure between pin 22 of IC750 and pin 3 of IC700
- Yes ↓

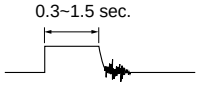
Does saw-toothed wave appear between pins 1 and 2 of IC700?
- No → Check the peripheral parts of IC700 and power line. If they are normal, IC700 is defective.
- Yes ↓ Saw-toothed waveform

Does saw-toothed wave appear between pins 3 and 4 of CNP751?
- Yes → CNP751 connection failure or optical pickup failure
- No ↓

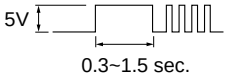
PWB pattern breakage

• Disc motor CLV servo failure

Does the disc motor run in the CD TEST mode3?
- No → Is voltage generated for about 0.3 to 1.5 sec between the pins 17 and 18 of IC700 when the mode is changed from the CD TEST mode 2 to 3?
  - Yes → Disc motor failure or wire breakage



  - No → Is the pin 37 of IC800 in High state for 0.3 to 1.5 sec when the CD TEST mode 2 is changed to 3? Does pulse appear subsequently?
    - No → IC800 is defective.
    - Yes → IC700 failure or wire breakage



- Yes (Extremely high speed rotation) ↓

Does eye pattern appear on the pin 3 of TEST point TP751? (Unclear waveform is allowable.)
- No → Check again for contamination of objective lens of optical pickup. If it is contaminated, clean. Check connection between the pin 41 of IC750 and the pin 19 of IC800. If it is normal, the optical pickup is defective.
- Yes ↓

Is eye pattern Vp-p 1.5V input into the pin 19 of IC800?
- No → Check the PWB pattern and C806
- Yes ↓

IC800 failure (check the peripheral parts and then replace)

• Sound is not output.

IIs digital signal output from the pin 1 (digital OUT) of BI800/ CNS553?
- No → Check the pin 28 of IC800.
- Yes ↓

Is digital signal sent to the MD PWB and CNS1901 pin 8?
- No → Check CD and MD connection.
- Yes ↓

Is audio signal output from the pins 22 an 23 of IC1401?
- No → Check connection of IC1201 and IC1401.
- Yes ↓

OK

• Slide motor fails to run.

Set the CD TEST mode, press the ►►I (skip) I◄◄ (skip) button, and check whether slide feed signal is output between the pin 20 of IC750 and 1/2VCC.
- No → Check connection of peripheral parts of IC750. If it is normal, IC750 is defective.
- Yes ↓

Is slide feed signal output between the pins 11 and 12 of IC700?
- No → Check connection between the pin 25 of IC700 and the pin 20 of IC750.
- Yes ↓

Is slide feed voltage applied to both ends of slide motor?
- No → Check the PWB pattern.
- Yes ↓

Check the slide motor. Apply DC2.0V to the slide motor terminal. If the slide motor fails to run, it is defective.

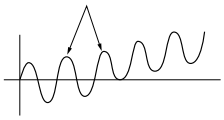
• Slide servo fails to operate.

s slide control voltage waveform (shown right) input into the pin 18 of IC750 during playback?
- No → Check connection of parts between the pins 17 and 18 of IC750 and the PWB pattern.
- Yes ↓

Is waveform shown right output to the pin 20 of IC750?
- No → IC750 is defective.
- Yes ↓

The slide servo system is not defective. Redo check.

Rotation cycle of motor



Voltage varies depending on eccentricity.

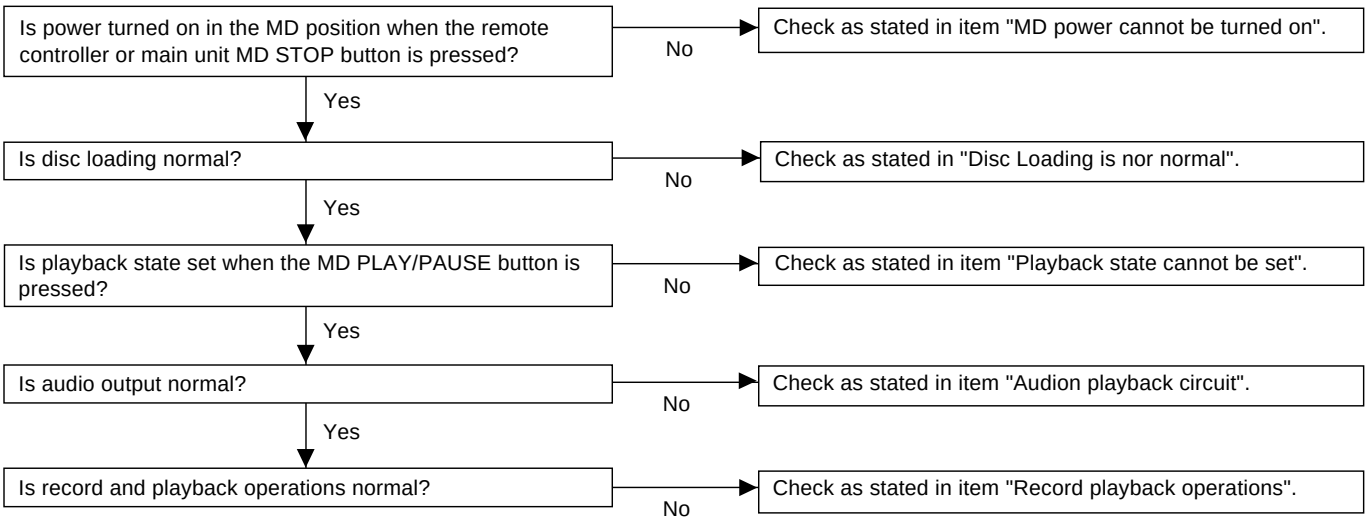
Slide control voltage waveform

TROUBLE SHOOTING (MD SECTION)

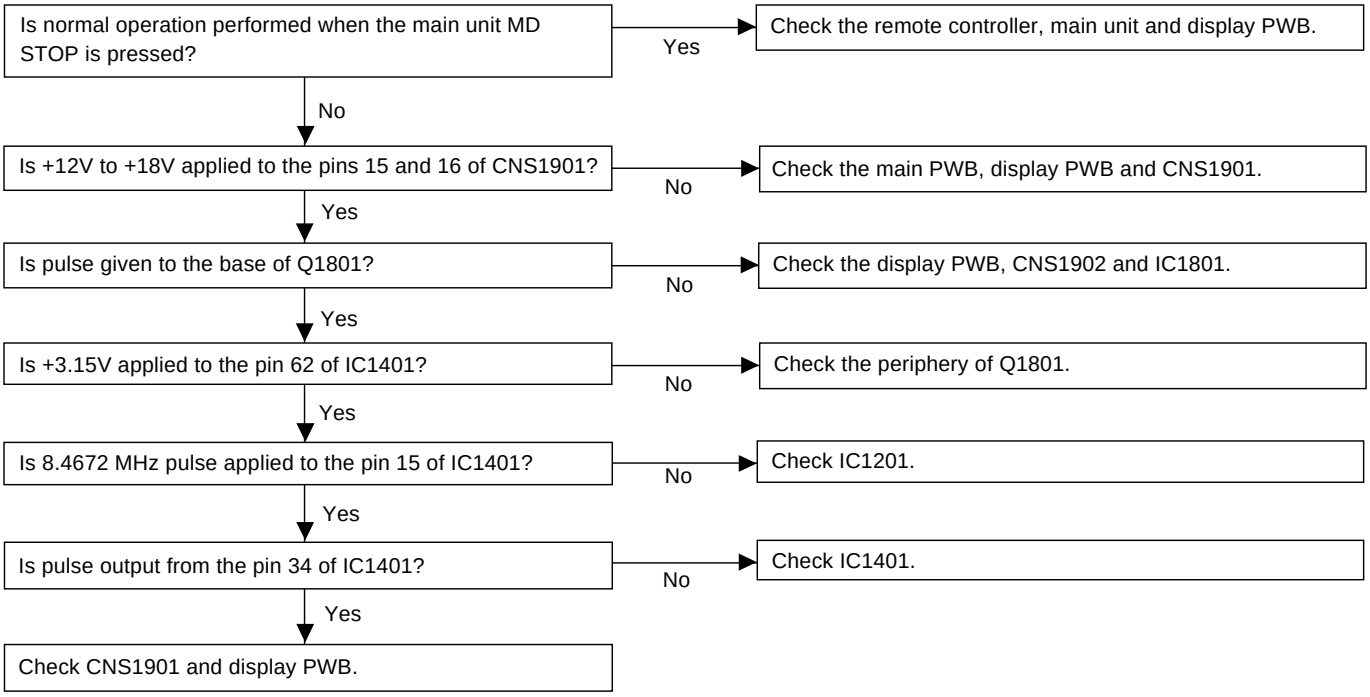
When MD fails to operate

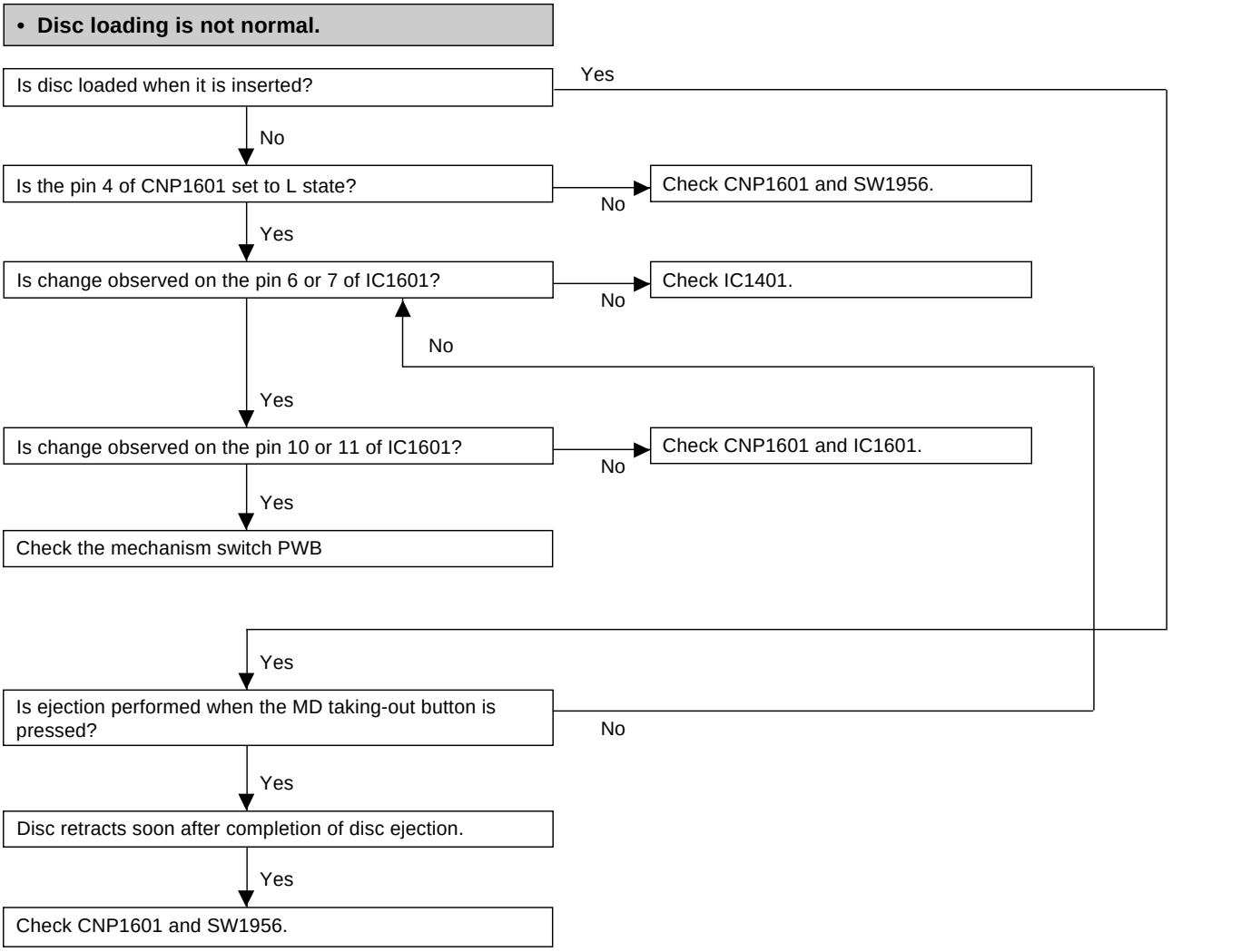
If the objective lens of optical pickup is contaminated, MD may fail to operate. At first, clean the objective lens to check playback operation. If MD fails persistently to operate, perform checks as follows.
If dust or foreign substance is accumulated on the pickup lens, playback is disturbed and indication of TOC (content of tracks) may be disabled. Before adjusting check that the lens is clean. If the lens is contaminated, treat it as follows.

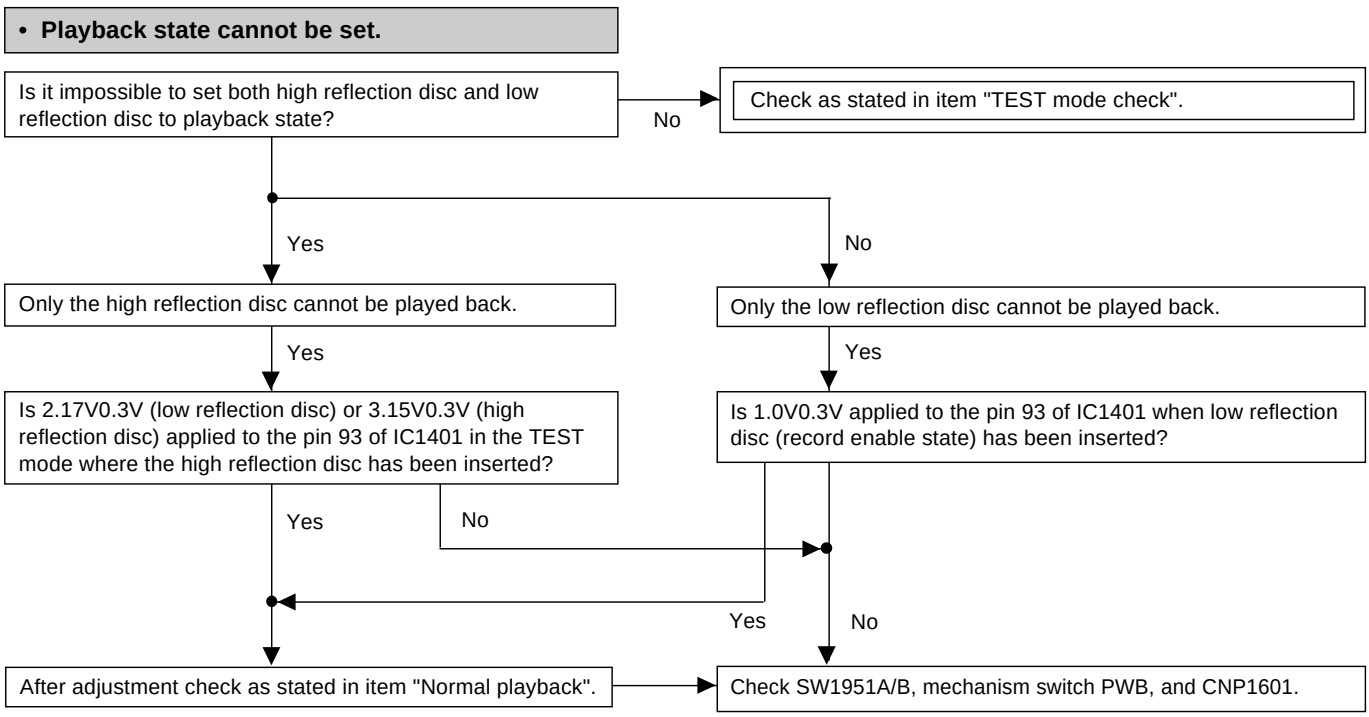
Turn off power supply, impregnate the lens cleaning paper with a small quantity of isopropyl alcohol, and gently wipe the lens with it with due care so that the lens is not damaged. At this time do not touch the lens directly with your finger.


Is power turned on in the MD position when the remote controller or main unit MD STOP button is pressed?
No
Check as stated in item "MD power cannot be turned on".
Yes
Is disc loading normal?
No
Check as stated in "Disc Loading is nor normal".
Yes
Is playback state set when the MD PLAY/PAUSE button is pressed?
No
Check as stated in item "Playback state cannot be set".
Yes
Is audio output normal?
No
Check as stated in item "Audion playback circuit".
Yes
Is record and playback operations normal?
No
Check as stated in item "Record playback operations".

- **MD power cannot be turned on.**

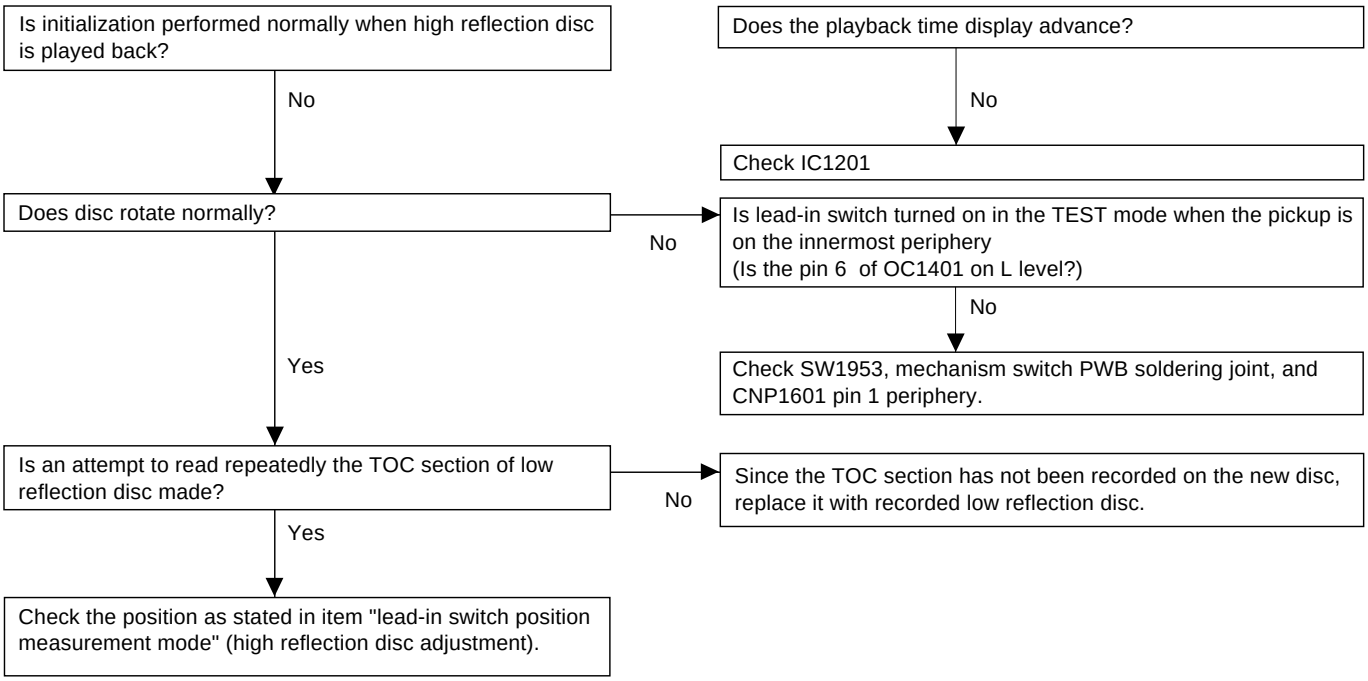

Is normal operation performed when the main unit MD STOP is pressed?
Yes
Check the remote controller, main unit and display PWB.
No
Is +12V to +18V applied to the pins 15 and 16 of CNS1901?
No
Check the main PWB, display PWB and CNS1901.
Yes
Is pulse given to the base of Q1801?
No
Check the display PWB, CNS1902 and IC1801.
Yes
Is +3.15V applied to the pin 62 of IC1401?
No
Check the periphery of Q1801.
Yes
Is 8.4672 MHz pulse applied to the pin 15 of IC1401?
No
Check IC1201.
Yes
Is pulse output from the pin 34 of IC1401?
No
Check IC1401.
Yes
Check CNS1901 and display PWB.


• Disc loading is not normal.
Is disc loaded when it is inserted?
Yes
No
Is the pin 4 of CNP1601 set to L state?
Check CNP1601 and SW1956.
No
Yes
Is change observed on the pin 6 or 7 of IC1601?
Check IC1401.
No
No
Yes
Is change observed on the pin 10 or 11 of IC1601?
Check CNP1601 and IC1601.
No
Yes
Check the mechanism switch PWB
Yes
Is ejection performed when the MD taking-out button is pressed?
No
Yes
Disc retracts soon after completion of disc ejection.
Yes
Check CNP1601 and SW1956.


• Playback state cannot be set.
Is it impossible to set both high reflection disc and low reflection disc to playback state?
Check as stated in item "TEST mode check".
No
Yes
No
Only the high reflection disc cannot be played back.
Only the low reflection disc cannot be played back.
Yes
Yes
Is 2.17V0.3V (low reflection disc) or 3.15V0.3V (high reflection disc) applied to the pin 93 of IC1401 in the TEST mode where the high reflection disc has been inserted?
Is 1.0V0.3V applied to the pin 93 of IC1401 when low reflection disc (record enable state) has been inserted?
Yes
No
Yes
No
After adjustment check as stated in item "Normal playback".
Check SW1951A/B, mechanism switch PWB, and CNP1601.

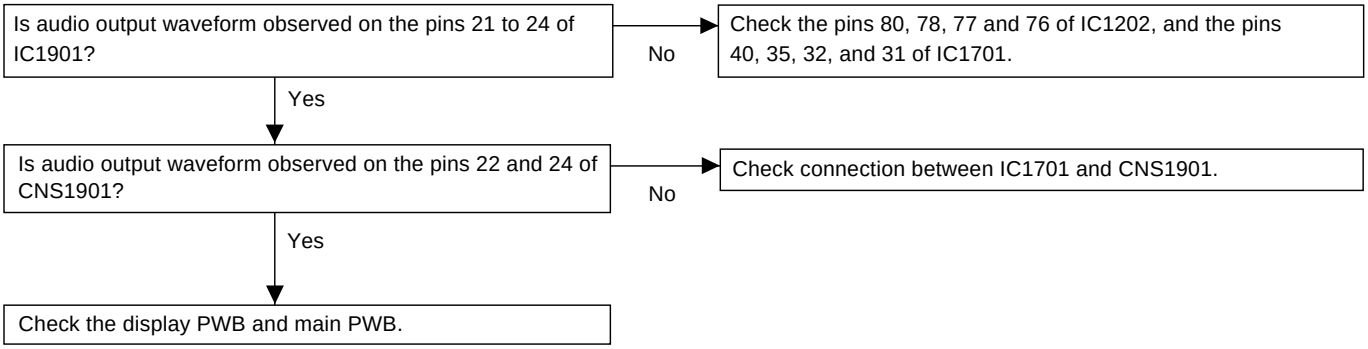
• Normal playback

When it has been confirmed that EEPROM value is normal in the TEST mode


Is initialization performed normally when high reflection disc is played back?
No
Does disc rotate normally?
No
Is lead-in switch turned on in the TEST mode when the pickup is on the innermost periphery
(Is the pin 6 of OC1401 on L level?)
No
Check SW1953, mechanism switch PWB soldering joint, and CNP1601 pin 1 periphery.
Yes
Is an attempt to read repeatedly the TOC section of low reflection disc made?
No
Since the TOC section has not been recorded on the new disc, replace it with recorded low reflection disc.
Yes
Check the position as stated in item "lead-in switch position measurement mode" (high reflection disc adjustment).
Does the playback time display advance?
No
Check IC1201

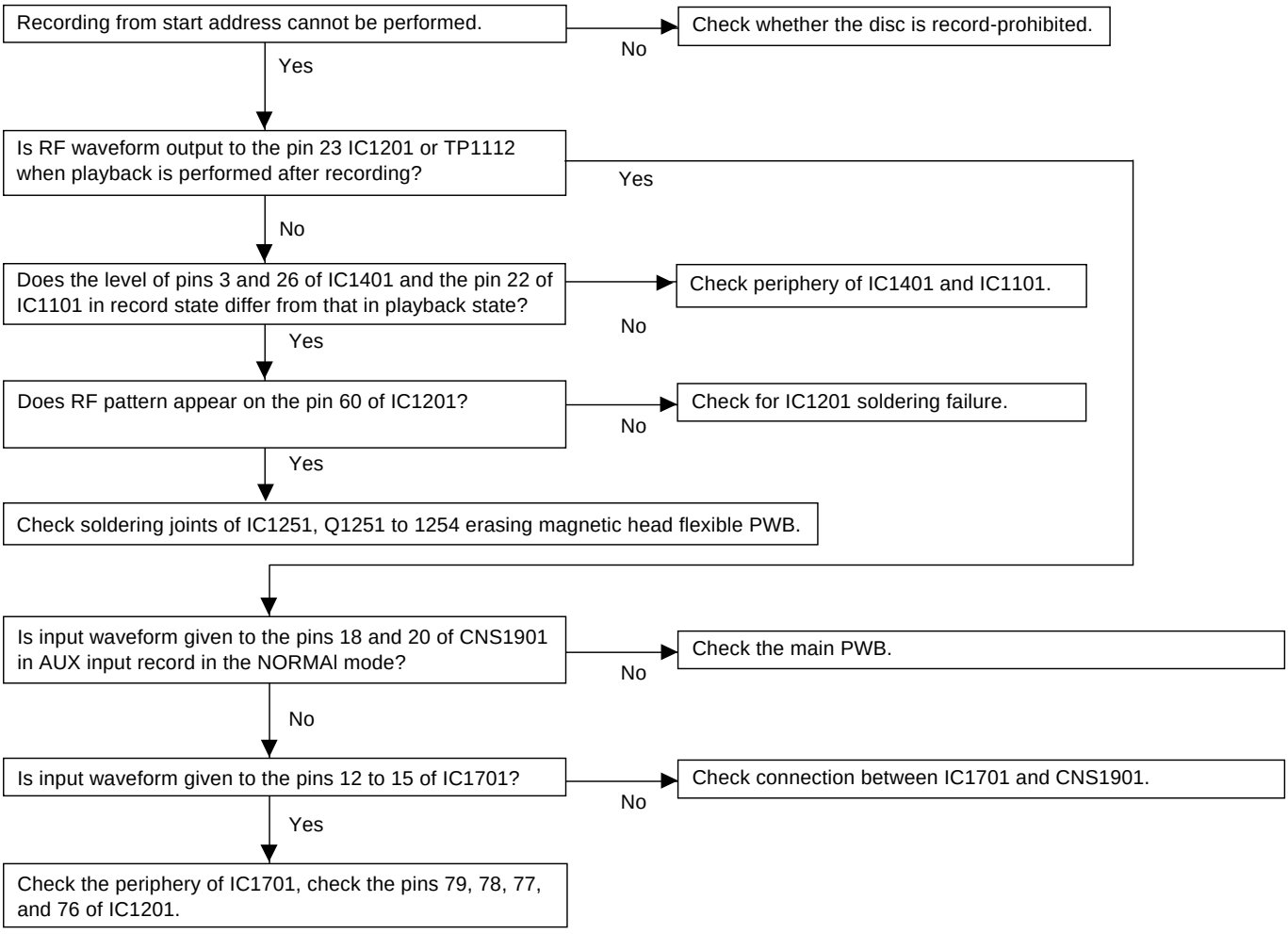
• Audio playback circuit

When sound is not output although the playback time display advances during playback in the normal mode.

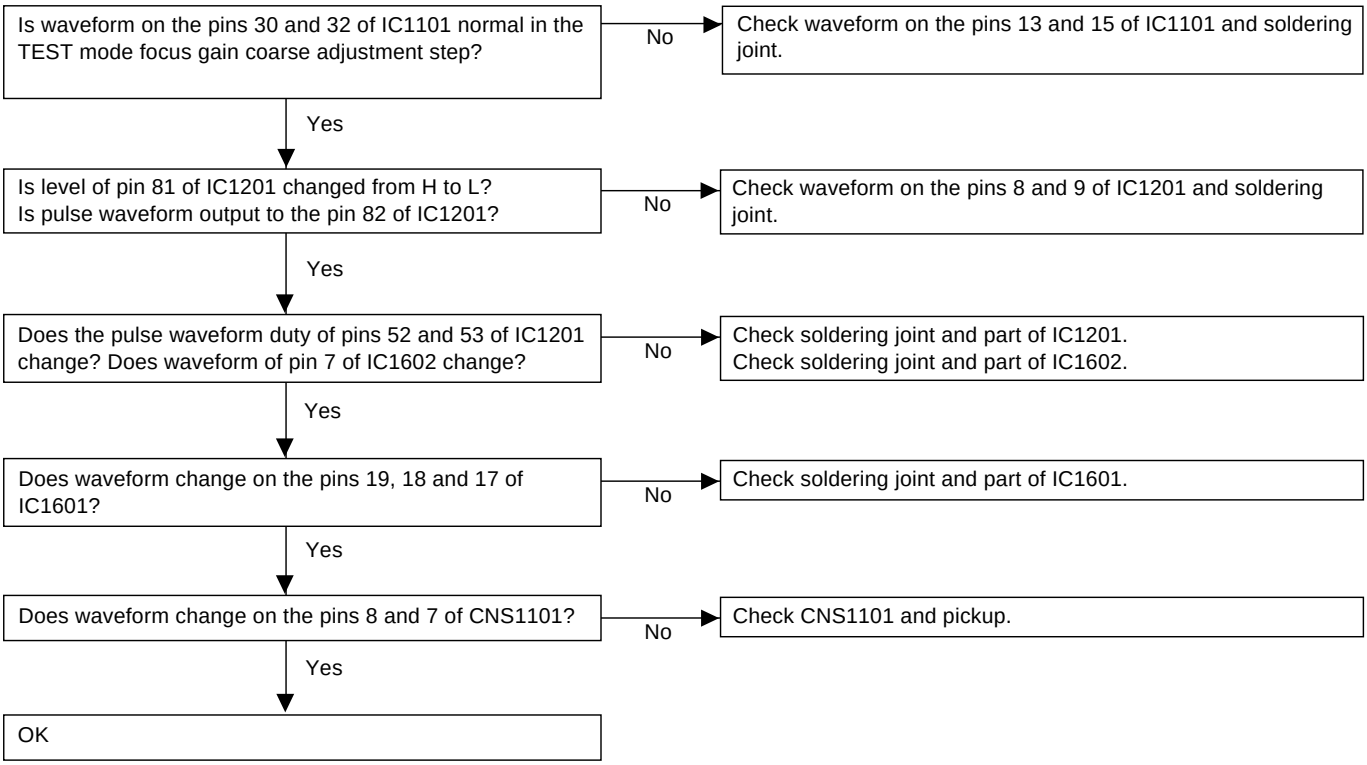

Is audio output waveform observed on the pins 21 to 24 of IC1901?
No
Check the pins 80, 78, 77 and 76 of IC1202, and the pins 40, 35, 32, and 31 of IC1701.
Yes
Is audio output waveform observed on the pins 22 and 24 of CNS1901?
No
Check connection between IC1701 and CNS1901.
Yes
Check the display PWB and main PWB.

• Record and playback operation

Insert the low reflection disc, and after verifying the audio output in the normal mode playback set the record/playback TEST mode


Recording from start address cannot be performed.
No
Check whether the disc is record-prohibited.
Yes
Is RF waveform output to the pin 23 IC1201 or TP1112 when playback is performed after recording?
Yes
No
Does the level of pins 3 and 26 of IC1401 and the pin 22 of IC1101 in record state differ from that in playback state?
Check periphery of IC1401 and IC1101.
No
Yes
Does RF pattern appear on the pin 60 of IC1201?
Check for IC1201 soldering failure.
No
Yes
Check soldering joints of IC1251, Q1251 to 1254 erasing magnetic head flexible PWB.
Is input waveform given to the pins 18 and 20 of CNS1901 in AUX input record in the NORMAl mode?
Check the main PWB.
No
No
Is input waveform given to the pins 12 to 15 of IC1701?
Check connection between IC1701 and CNS1901.
No
Yes
Check the periphery of IC1701, check the pins 79, 78, 77, and 76 of IC1201.

• Focus servo failure


Is waveform on the pins 30 and 32 of IC1101 normal in the TEST mode focus gain coarse adjustment step?
No
Check waveform on the pins 13 and 15 of IC1101 and soldering joint.
Yes
Is level of pin 81 of IC1201 changed from H to L?
Is pulse waveform output to the pin 82 of IC1201?
No
Check waveform on the pins 8 and 9 of IC1201 and soldering joint.
Yes
Does the pulse waveform duty of pins 52 and 53 of IC1201 change? Does waveform of pin 7 of IC1602 change?
No
Check soldering joint and part of IC1201.
Check soldering joint and part of IC1602.
Yes
Does waveform change on the pins 19, 18 and 17 of IC1601?
No
Check soldering joint and part of IC1601.
Yes
Does waveform change on the pins 8 and 7 of CNS1101?
No
Check CNS1101 and pickup.
Yes
OK

MD-ZV30H

• Disc motor fails to run

Does waveform appear on the pins 58 and 59 of IC1201 and the pin 1 of IC1603 in the TEST mode focus gain coarse adjustment step?

No → Check soldering joint and parts of pins 58 and 59 of IC1201, IC1603, and peripheral circuit.

Yes ↓

Does waveform appear on the pins 11 and 12 of IC1601, pins 3 and 4 of CNP1602?

No → Check soldering joint of PWB of completed IC1601 and CNP1601 disc motor.

Yes ↓

Does voltage on the pins 3 and 4 of flexible PWB of completed disc motor change?

Yes ↓

Replace the completed disc motor.

• Tracking servo failure

Does waveform appear on the pin 1 of IC1602, pins 15 and 16 of IC1601, and pins 4 and 6 of CNS1101 in the TEST mode focus gain adjustment step?

No → Check the soldering joint of pins 64 and 65 of IC1201, IC1602, IC1601, CNS1101.

Yes ↓

Replace the optical pickup.

• Slide servo failure

Does the pickup move to external and internal periphery when the ►► or ◄◄ button is pressed in the TEST mode?

Yes → Check the waveform on the pins 56 and 57 of IC1201, pin 7 of IC1603, check the peripheral parts and soldering joint.

No ↓

Is there any change on the pins 56 and 57 of IC1201 when the ►► or ◄◄ button is pressed?
Is there any change on the pin 7 of IC1603?

No → Check the waveform on the pins 56 and 57 of IC1201, and pin 7 of IC1603, check the peripheral parts and soldering joint.

Yes ↓

Is there any change on the pins 13 and 14 of IC1601, and the pins 1 and 2 of CNP1601 when the ►► or ◄◄ button is pressed?

No → Check the soldering joint of IC1601 and CNP1601.

Yes ↓

Does voltage on the positive and negative terminals of slide motor change when the ►► or ◄◄ button is pressed?

No → Check the soldering joint connected to the slide motor to see whether there is wire breakage.

Yes ↓

Replace the slide motor.

FUNCTION TABLE OF IC

IC901 RH-iX0188AWZZ(IX0188AW):System Microcomputer (1/3)

Pin No.	Port Name	Terminal Name	Input/Output	Function
1	P77/AN7	KEY1	Input	A/D input
2	P76/AN6	KEY2	Input	A/D input
3	P75/AN5	KEY3	Input	A/D input
4	P74/AN4	JOG1	Input	JOG1 input
5	P73/AN3	JOG2	Input	JOG2 input
6	P72/AN2	VOL SCL	Output	CLK for M62419 control
7	P71/AN1	VOL/EXP DAT	Output	Data for M62419 control, Data for EXP
8	P70/AN0	INT	Input	A/D input reset for destination setting Checking in case of power failure recovery
9	PB3	EXP-CLK	Output	Clock for EXP
10	PB2/DA	FUNC-OUT	Output	CD: 5.0V/TUN: 2.5V D/A output
11*	P57/SRDY	NC	Output	L fixed
12	P56/SCLK	(CD) MLAS	Outout	Latch clock output for CD servo
13	P55/SOUT	(CD) LD ON	Output	ON: H
14	P54/SIN3	(C/T)MCK/TCLK	Output	CD mode: CD serial data clock TUN clock output (TUN)
15	P53/SRDY3	(C/T)MLAD/TPIR	Output	OD mode: CD serial data latch clock output TUN period output (TUN)
16	P52/SCLK2	(C/T)MSD/TI/O	Input/Output	CD mode: CD serial data input/output TUN mode: For PLL TC9216 control OUT frequency, reference frequency, IN IF count data, etc.
17	P51/SOUT2	(CD) JP1	Output	Usually H; when JUMP PULSE is reversed at once: L
18	P50/SIN2	(CD) PU-IN	Input	CD pickup innermost periphery: L When L level is set, the slide stops.
19	P67/SRDY1	(MD) DSTB	Input	MD strobe input
20	P66/SCLK1	(MD) DSCK	Output	MD clock output
21	P65/SOUT1	(MD) KDATA	Output	MD KEY data
22	P64/SIN1	(MD) MDDATA	Input	MD data input
23	P63/CNTR1	CD D-OUT/ (TUN) ST-IND	Input	CD mode 1: Focus check OK = H NG = L 1: TC count pulse TUN mode 3: STEREO IND input L: STEREO
24	P62/CNTR0	(CD) ROCK/ DRD	Input	1. Disc linear rotational speed reduction signal Usually = L 25%, deceleration : H
25	P61/PWM	(CH) CLK	Output	CHANGER clock output
26	P60	(CH) STB	Input	CHANGER strobe input
27	P47/T3 OUT	(CH) DATA	Input	For CHANGER MODE detection
28	P46/T1 OUT	(CH) KEY	Output	CHANGER KEY data
29	P45/INT1/ZCR	P-IN	Input	Power failure detection fall detection
30*	P44/INT4	NAME IN	Input	NAME serial input
31	P43/INT3	EXP1-LCK	Output	Latch clock for extension port 1
32	P42/INT2	RX-IN	Input	Remote control input
33	P41	EXP2-LCK/ L-MUTE	Output	Latch clock for extension port 3
34	P40/INT0	(CD) SBQS	Input	Subcode Q register read interruption signal L: Read enable
35	RESET	RESET	Input	L: Reset at H
36	XCIN	XCIN	Input	32.768 kHz crystal connection
37	XCOUT	XCOUT	Output	32.768 kHz crystal connection
38	XIN	XIN	Input	8 MHz ceralock connection
39	XOUT	XOUT	Output	8 MHz ceralock connection
40*	VSS	VSS	–	GND terminal
41	P27	MD SYN/ (TUN) AM-ST	Output	CD PLAY mode = L (including CUEW/REVIW) AM STEREO: L
42	P26	(MD) LOAD	Input	MD LOAD SW detection H-L = DISC IN
43	P25	(MD) S-ID	Output	1. 20 mS H output at the CD track top 2. MD ON RESET, power failure recovery: 100 mS H output
44	P24	(MD) RESET	Output	Reset output

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

MD-ZV30H

IC901 RH-iX0188AWZZ(IX0188AW):System Microcomputer (2/3)

Pin No.	Port Name	Terminal Name	Input/Output	Function
45	P23/DIG19	DIG07	Output	Digit output for FL
46	P22/DIG18	DIG06	Output	Digit output for FL
47	P21/DIG17	DIG05	Output	Digit output for FL
48	P20/DIG16	DIG04	Output	Digit output for FL
49	P17/DIG15	DIG03	Output	Digit output for FL
50	P16/DIG14	DIG02	Output	Digit output for FL
51	P15/DID13	DIG01	Output	Digit output for FL
52	P14/DIG12	DIG08	Output	Digit output for FL
53	P13/DIG11	DIG09	Output	Digit output for FL
54	P12/DIG10	DIG10	Output	Digit output for FL
55	P11/DIG09	DIG11	Output	Digit output for FL
56	P10/DIG08	DIG12	Output	Digit output for FL
57	P07/DIG07	DIG13	Output	Digit output for FL
58	P06/DIG06	DIG14	Output	Digit output for FL
59	P05/DIG05	DIG15	Output	Digit output for FL
60	P04/DIG04	DIG16	Output	Digit output for FL
61	P03/SEG35	SEG36	Output	Segment output for FL
62	P02/SEG34	SEG35	Output	Segment output for FL
63	P01/SEG33	SEG34	Output	Segment output for FL
64	P00/SEG32	SEG33	Output	Segment output for FL
65	P37/SEG31	SEG32	Output	Segment output for FL
66	P36/SEG30	SEG31	Output	Segment output for FL
67	P35/SEG29	SEG30	Output	Segment output for FL
68	P34/SEG28	SEG29	Output	Segment output for FL
69	P33/SEG27	SEG28	Output	Segment output for FL
70	P32/SEG26	SEG27	Output	Segment output for FL
71	P31/SEG25	SEG26	Output	Segment output for FL
72	P30/SEG24	SEG01	Output	Segment output for FL
73	P97/SEG23	SEG02	Output	Segment output for FL
74	P96/SEG22	SEG03	Output	Segment output for FL
75	P95/SEG21	SEG04	Output	Segment output for FL
76	P94/SEG20	SEG05	Output	Segment output for FL
77	P93/SEG19	SEG36	Output	Segment output for FL
78	P92/SEG18	SEG07	Output	Segment output for FL
79	P91/SEG17	SEG08	Output	Segment output for FL
80	P90/SEG16	SEG09	Output	Segment output for FL
81	P87/SEG15	SEG10	Output	Segment output for FL
82	P86/SEG14	SEG11	Output	Segment output for FL
83	P85/SEG13	SEG12	Output	Segment output for FL
84	P84/SEG12	SEG13	Output	Segment output for FL
85	P83/SEG11	SEG14	Output	Segment output for FL
86	P82/SEG10	SEG15	Output	Segment output for FL
87	P81/SEG09	SEG16	Output	Segment output for FL
88	P80/SEG08	SEG17	Output	Segment output for FL
89	PA7/SEG07	SEG18	Output	Segment output for FL
90	PA6/SEG06	SEG19	Output	Segment output for FL
91*	VSS	VSS	–	GND terminal
92	PA5/SEG05	SEG20	Output	Segment output for FL
93	PA4/SEG04	SEG21	Output	Segment output for FL
94	PA3/SEG03	SEG22	Output	Segment output for FL
95	PA2/SEG02	SEG23	Output	Segment output for FL

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC901 RH-iX0188AWZZ(IX0188AW):System Microcomputer (3/3)

Pin No.	Port Name	Terminal Name	Input/Output	Function
96	PA1/SEG01	SEG24	Output	Segment output for FL
97	PA0/SEG00	SEG25	Output	Segment output for FL
98	VEE	VEE	Input	Pull-down voltage input for FL drive
99	AVSS	AVSS	Input	A/D reference voltage input (GND)
100	VREF	VREF	Input	A/D reference voltage input (GND)

IC901 RH-iX0188AWZZ(IX0188AW):System Microcomputer

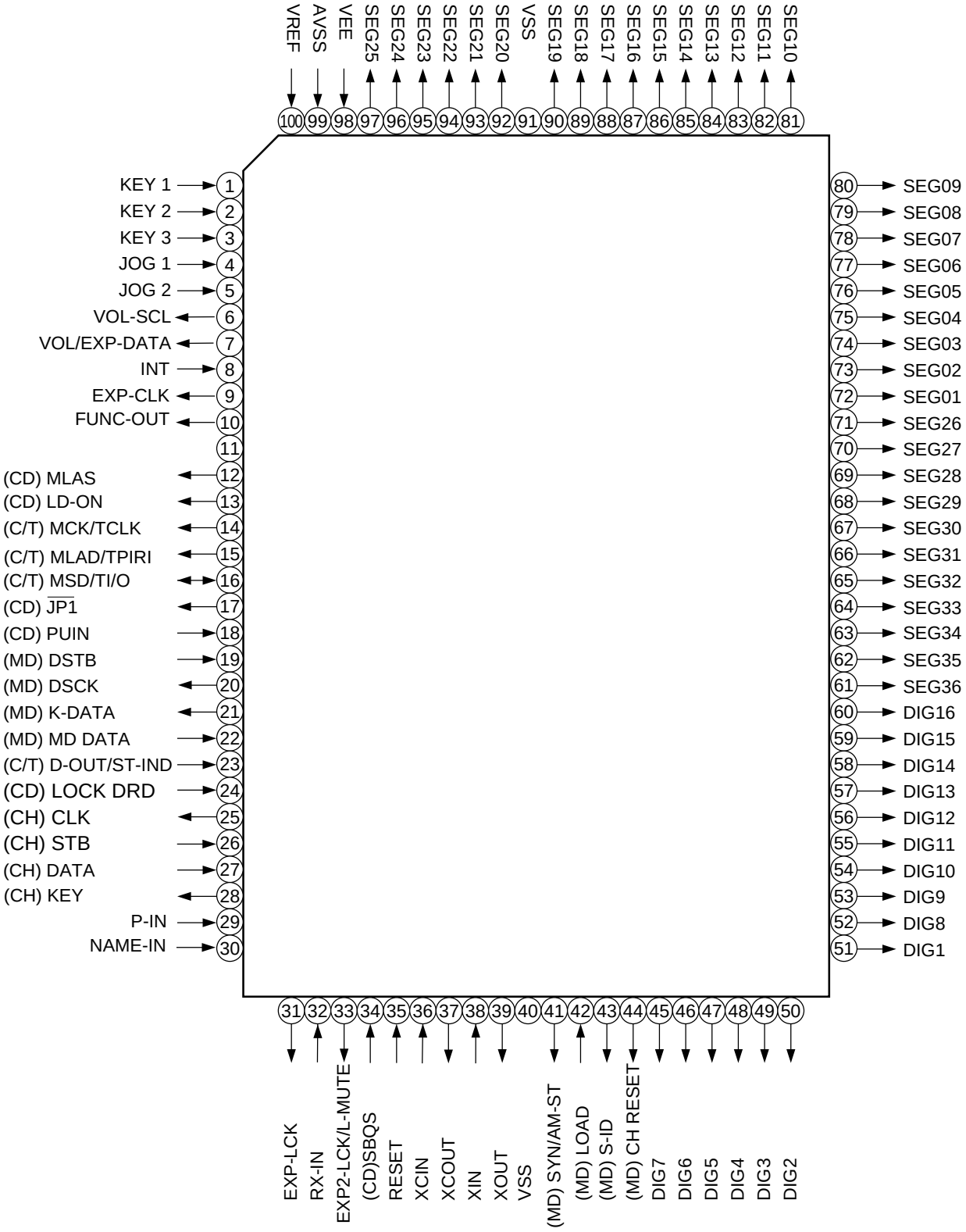


Figure 85 BLOCK DIAGRAM OF IC

MD-ZV30H

IC1401 RH-iX2565AFZZ (IX2565AF):MD System Control Microcomputer (1/2)

Pin No.	Terminal Name	Input/Output	Function
1*	P96/ANEX1	Output	NC (Not Connect)
2*	P95/ANEX0	Output	NC (Not Connect)
3	P94/DA1	Output	LDVAR (laser power adjusting output)
4*	P93/DA0	Output	ADJS (automatic adjusting step check)
5*	P92/TB2IN	Output	NC (Not Connect)
6	P91/TB1IN	Input	LDSWCK input (interruption only in discrete state)
7	P90/TB0IN	Input	ERROR input
8	BYTE	Input	BYTE
9	CNVSS	Input	CNVSS
10*	P87/XCIN	Output	NC (Not Connect)
11*	P86/XCOUT	Output	NC (Not Connect)
12	RESET	Input	RESET input
13*	XOUT	—	NC (Not Connect)
14	VSS	—	GND
15	XIN	Input	XTAL (8.4672 MHz input)
16	VCC	—	+3.15V
17	P85/NMI	Input	Add Vcc
18	P84/INT2	Input	DINT (interruption input from MD record/playback LSI)
19	P83/INT4	Input	DSENSE (MD record/playback LSI servo sense input)
20	P82/INT0	Input	ST-ID/MD-ON
21	P81/TA4IN	Input	CD search input (synchro REC suspension input)
22	P80/TA4OUT	Output	MDRSW output
23	P77/TA3IN	Output	FSW1 (SW power frequency selection)
24	P76/TA3OUT	Output	FSW2 (SW power f H/L selection)
25	P75/TA2IN	Input	P-DOWN (power failure detection)
26	P74/TA2OUT	Output	HDON (magnetic head current ON/OFF output)
27	P73/TA1IN	Output	LD+ (loading motor + control output)
28	P72/TA1OUT	Output	LD- (loading motor - control output)
29	P71/TA0IN	Input	CIN (track count signal input)
30	P70/TA0OUT	Input	INN SW (Inner SW detection input)
31	P67/TXD1	Input	Ground to unused GND
32	P66/RXD1	Input	Ground to unused GND
33	P65/CLK1	Input	Ground to unused GND
34	P64/CT1/RTS1/ CTS0/CLKS	Output	DSTB (system control communication enable and communication being executed)
35	P63/TXD0	Output	MD DATA (MD data output)
36	P62/RXD0	Input	K DATA (system control data input)
37	P61/CLK0	Input	DSCK (system control communication input)
38	P67/CTS0/RTS0	Input	Ground to unused GND
39	P57	Output	R/P (REC/PLAY selection)
40	P56	Input	FOK (focus servo status monitot input)
41	P55	Output	HF ON (high frequency superimposition ON/OFF output)
42	P54	Input	SEL1 (Ground to GND)
43	P53	Input	SEL0 (Ground to GND)
44	P52	Output	SYRS (MD record/playback LSI resistor selection signal output)
45	P51	Output	SYRD (MD record/playback read signal output)
46	P50	Output	SYWB (MD record/playback write signal output)
47	P47	Input/Output	SYSD7 (ENDEC/ATRAC data bus 7)
48	P46	Input/Output	SYSD6 (ENDEC/ATRAC data bus 6)
49	P45	Input/Output	SYSD5 (ENDEC/ATRAC data bus 5)
50	P44	Input/Output	SYSD4 (ENDEC/ATRAC data bus 4)
51	P43	Input/Output	SYSD3 (ENDEC/ATRAC data bus 3)

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC1401 RH-iX2565AFZZ (IX2565AF):MD System Control Microcomputer (2/2)

Pin No.	Terminal Name	Input/Output	Function
52	P42	Input/Output	SYSD2 (ENDEC/ATRAC data bus 2)
53	P41	Input/Output	SYSD1 (ENDEC/ATRAC data bus 1)
54	P40	Input/Output	SYSD0 (ENDEC/ATRAC data bus 0)
55*	P37	Output	NC (Not Connect)
56*	P36	Output	NC (Not Connect)
57*	P35	Output	NC (Not Connect)
58	P34	Output	EEPRO(EEPROM protection cancel)
59	P33	Output	EPCS (EEPROM chip selector output)
60	P32	Input/Output	EEPD (EEPROM serial data output)
61	P31	Output	EEPK (EEPROM serial clock output)
62	VCC	Input	+3.15V
63*	P30	Output	NC (Not Connect)
64	VSS	–	GND
65*	P27	Output	NC (Not Connect)
66*	P26	Output	NC (Not Connect)
67*	P25	Output	NC (Not Connect)
68*	P24	Output	HS/NS (high speed/low speed)
69	P23	Output	DISC (H: Pit)
70	P22	Output	PCNT0
71	P21	Output	PCNT1
72	P20	Output	LD ON(H:ON)
73*	P17	Output	ANANLPTR output
74	P16	Output	ADPON output
75	P15	Output	DAPON output
76*	P14	Output	DFS0 output
77*	P13	Output	DFS1 output
78*	P12	Output	DIG EX output
79*	P11	Output	DIG CD output
80	P10	Output	XRST (system reset output)
81*	P07	Output	AD MUTE output
82	P06	Output	EMPHA output
83*	P05	Output	DA MUTE (audio mute ON/OFF output)
84*	P04	Output	MUTE
85	P03	Output	DOUTMT
86	P02	Input	TEST2 (special mode selection 2)
87	P01	Input	TEST1 (special mode selection 1)
88	P00	Input	TEST0 (special mode selection 0)
89	P107/AN7/KI3	Input	TCG (TOTAL signal detection input)
90	P106/AN6/KI2	Input	AVCK2 (AD/DA section 3.1V monitor input)
91	P105/AN5/KI1	Input	AVCK1 (AD/DA section 5V monitor input)
92	P104/AN4/KI0	Input	TEMP (temperature sensor detection input)
93	P103/AN3	Input	MINF (disc type/REC window)
94	P102/AN2	Input	TESTK1 (test key input 1)
95	P101/AN1	Input	TESTK2 (test key input 2)
96	AVSS	–	GND
97	P100/AN0	Input	HINF (mechanism position/HEAD position)
98	VREF	–	VREF (+3.15V)
99	AVCC	–	+3.15V
100	P97/ADTAG	Input	Ground to unused GND

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

- MEMO -

SHARP PARTS GUIDE

MODEL MD-ZV30H

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. No.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

VCC ..... Ceramic type
VCK ..... Ceramic type
VCT ..... Semiconductor type
VC • • MF ..... Cylindrical type (without lead wire)
VC • • MN ..... Cylindrical type (without lead wire)
VC • • TV ..... Square type (without lead wire)
VC • • TQ ..... Square type (without lead wire)
VC • • CY ..... Square type (without lead wire)
VC • • CZ ..... Square type (without lead wire)
VC • • • • • • • • • J .. The 13th character represents capacity difference.
("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
"C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)

If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD ..... Carbon-film type
VRS ..... Carbon-film type
VRN ..... Metal-film type
VR • • MF ..... Cylindrical type (without lead wire)
VR • • MN ..... Cylindrical type (without lead wire)
VR • • TV ..... Square type (without lead wire)
VR • • TQ ..... Square type (without lead wire)
VR • • CY ..... Square type (without lead wire)
VR • • CZ ..... Square type (without lead wire)
VR • • • • • • • • • J .. The 13th character represents error.
("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.

NOTE:
Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

MD-ZV30H

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
INTEGRATED CIRCUITS				
IC1	VHITA7358AP-1	J	AG	FM Front End,TA7358AP
IC2	VHITA2057N/-1	J	AQ	FM IF/FM MPX./AM IF,TA2057N
IC3	VHITC9216P/-1	J	AL	PLL,TC9216P
IC301	VHINJM4558L-1	J	AC	Ope Amp.,NJM4558L
IC302	VHIMC14066B-1	J	AD	MIC/AUX Input Selector, MC14066B
IC351	VHIM62419FP-1	J	AX	Audio Processor,M62419FP
IC451	VHINJM4558L-1	J	AC	Record Amp.,NJM4558L
IC501	VHILA4705SH-1	J	AP	Power Amp.,LA4705SH
IC551	VHIBA3935//-1	J	AN	Voltage Regulator,BA3935
IC571	VHIM5278L56-1	J	AE	Voltage Regulator,M5278L56
IC700	VHIBA5920FP-1	J	AR	Focus/Tracking/Spin/ Slide Driver,BA5920FP
IC750	VHIM62472FP-1	J	AV	Servo Control,M62472FP
IC800	VHIM65821FP-1	J	BA	Servo/Signal Control,M65821FP
IC901	RH-IX0188AWZZ	J	BB	System Microcomputer, IX0188AW
IC903	VHIPST9127/-1	J	AG	Reset,PST9127
IC1101	VHIIR3R50//-1	J	AV	RF Signal Processor,IR3R50
IC1201	VHILR37643/-1	J	BM	ENDEC,LR37643
IC1202	RH-IX2474AFZZ	J	BF	4Mbit D-RAM,IX2474AF
IC1251	VHI74ACT02F-1	J	AF	Head Driver,74ACT02F
IC1401	RH-IX2565AFZZ	J	AX	MD System Control Microcomputer,IX2565AF
IC1402	VHIS29194A/-1	J	AG	E^2PROM,S29194A
IC1601	VHIBA6996FP-1	J	AP	5-CH Motor Driver,BA6996FP
IC1602,1603	VHINJM2115M-1	J	AE	Ope Amp.,NJM2115M
IC1701	VHITDA1309H-3	J	AX	A/D,D/A Converter,TDA1309H
IC1801	VHIHA16114F-1	J	AM	Switching Regulator,HA16114F
IC1802	VHINJM2403M-1	J	AE	Compareter,NJM2403M
IC1803	VHINJM2904M-1	J	AH	Compareter,NJM2904M
IC1913	VHI74VHC08F-1	J	AE	Voltage Transformation, 74VHC08F
ICA101	VHISRS5250S-1	J	BL	SRS,SRS5250S
ICA102	VHIBU4052BC-1	J	AH	SRS Mode Selector, BU4052BC
ICA103	VHIBU2092//-1	J	AM	SRS Selector,BU2092
ICA104	VHIBU4066BCF1	J	AD	Input Selector,BU4066BCF
ICB101	RH-IX0177AWZZ	J	AR	Changer Microcomputer, IX0177AW
ICB102	VHITA7291S/-1	J	AH	Tray Motor Driver, TA7291S
ICB103	VHITA7291S/-1	J	AH	Main Cam Motor Driver, TA7291S
ICB104	VHIPST9127/-1	J	AG	Reset,PST9127
TRANSISTORS				
Q1	VS2SC535-C/-1	J	AC	Silicon,NPN,2SC535 C
Q23	VSDTC144ES/-1	J	AB	Digital,NPN,DTC144 ES
Q41	VS2SC1740SR-1	J	AB	Silicon,NPN,2SC1740 SR
Q42	VS2SC1740LSR1	J	AB	Silicon,NPN,2SC1740 LSR
Q76	VSKRA101M//-1	J	AB	Silicon,PNP,KRA101 M
Q301,302	VSDTC363TS/-1	J	AC	Digital,NPN,DTC363 TS
Q303	VSKRA104M//-1	J	AC	Silicon,PNP,KRA104 M
Q304	VSDTC144ES/-1	J	AB	Digital,NPN,DTC144 ES
Q351	VS2SD467-C/-1	J	AC	Silicon,PNP,2SD467 C
Q401,402	VS2SC1740LSR1	J	AB	Silicon,NPN,2SC1740 LSR
Q502	VSKRA104M//-1	J	AC	Silicon,PNP,KRA104 M
Q503,504	VS2SC2827B/-1	J	AC	Silicon,NPN,2SC2827 B
Q611	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q701	VSKRA103S//-1	J	AB	Silicon,PNP,KRA103 S
Q751	VS2SA1015GR-1	J	AB	Silicon,PNP,2SA1015 GR
Q901,902	VSKTC3199GR-1	J	AB	Digital,NPN,KTC3199 GR
Q1101	VS2SB1424R/-1	J	AC	Silicon,PNP,2SB1424 R
Q1251,1252	VS2SK1847//-1	J	AD	FET,2SK1847
Q1253,1254	VS2SK1473//-1	J	AF	FET,2SK1473
Q1403	VSRN2404///-1	J	AC	Digital,PNP,RN2404
Q1404	VSRNC1404//-1	J	AB	Digital,NPN,RNC1404
Q1451	VS2SC2712GR-1	J	AB	Silicon,NPN,2SC2712 GR
Q1701	VS2SC2712GR-1	J	AB	Silicon,NPN,2SC2712 GR
Q1801	VS2SB1424R/-1	J	AC	Silicon,PNP,2SB1424 R
Q1803	VSRN2407///-1	J	AB	Digital,PNP,RN2407
Q1804,1805	VSRNC1404//-1	J	AB	Digital,NPN,RNC1404
Q1807	VS2SB1424R/-1	J	AC	Silicon,PNP,2SB1424 R
Q1808~1810	VS2SC2712GR-1	J	AB	Silicon,NPN,2SC2712 GR
QA101	VS2SD468-C/-1	J	AD	Silicon,NPN,2SD468 C
QB102	VSKRC107M//-1	J	AC	Digital,NPN,KRC107 M
DIODES				
D1~6	VHD1SS133//-1	J	AA	Silicon,1SS133
D11~13	VHD1SS133//-1	J	AA	Silicon,1SS133
D351	VHEMTZJ5R1B-1	J	AC	Zener,5.1V,MTZJ5.1B
D555	VHERD5R1JS2-1	J	AB	Zener,5.1V,RD5.1JS2
D556	VHD1SS133//-1	J	AA	Silicon,1SS133
⚠D601	VHDS4VB20//-1	J	AG	Rectifier,S4VB20
D611	VHDRL104A//-1	J	AB	Silicon,RL104A
D612	VHEMTZJ6R8B-1	J	AC	Zener,6.8V,MTZJ6.8B
D613	VHEMTZJ330B-1	J	AB	Zener,33V,MTZJ33B
D614	VHEMTZJ270D-1	J	AA	Zener,27V,MTZJ270D
D615	VHDRL104A//-1	J	AB	Silicon,RL104A
D803	VHDDA118///-1	J	AB	Silicon,DA118
D804~806	VHDDA119///-1	J	AA	Silicon,DA119
D810	VHEMTZJ3R0B-1	J	AB	Zener,3V,MTZJ3.0B
D901	VHDKDS196//-1	J	AB	Silicon,KDS196
D902	VHDKDS184//-1	J	AB	Silicon,KDS184
D904	VHDKDS226//-1	J	AB	Silicon,KDS226
D1251,1252	VHDSB0209CP-1	J	AC	Silicon,SB0209CP
D1401	VHDDA204K//-1	J	AB	Silicon,DA204K
D1801,1802	VHDSB1005PC-1	J	AC	Silicon,SB1005PC
D1803	VHEHZU9R1B2-1	J	AC	Zener,9.1V,HZU9R1B2
DA101	VHD1SS133//-1	J	AA	Silicon,1SS133
VD2,3	VHCKV1350NT-1	J	AE	Variable Capacitance,KV1350NT
VD4	VHCKV1581A2-1	J	AN	Variable Capacitance,KV1581A2
FILTERS				
CF2	RFILF0124AFZZ	J	AD	FM IF,10.7 MHz
CF3	92LFILTA-1585A	J	AH	AM IF
CF22	RCRM-0025AWZZ	J	AE	VCO
PF1	92LFILTF1764AT	J	AD	FM Band Pass Filter
TRANSFORMERS				
T1	RCILI0006AWZZ	J	AD	FM IF
T2	RCILA1064AFZZ	J	AD	AM Antenna
T3	RCILB0030AWZZ	J	AE	AM OSC
⚠T601	RTRNP0146AWZZ	J	AY	Power
COILS				
L1	RCILR0031AWZZ	J	AB	FM IF
L3	RCILB0063AWZZ	J	AD	FM RF
L21	RCILI0312AFZZ	J	AC	FM Detector
L41	VP-MK470K0000	J	AB	47 µH,Choke
L301	VP-DH1R0M0000	J	AB	1 µH,Choke
L351	VP-MK101K0000	J	AB	100 µH,Choke
L551	VP-MK470KR47K	J		47 µH,Choke
L552	VP-DHR22K0000	J	AB	0.22 µH
L553,554	VP-MK470K0000	J	AB	47 µH,Choke
L555	VP-DH1R0M0000	J	AB	1 µH,Choke
L570	VP-DHR22K0000	J	AB	0.22 µH
L901	VP-MK220K0000	J	AB	22 µH,Choke
L902,903	RCILC0232AFZZ	J	AC	4.7 µH,Choke
L904	VP-DH4R7K0000	J	AB	4.7 µH,Antenna Choke
L1101	VPANMR47K0000	J	AD	0.47 µH
L1102	VP-NM1R0M0000	J	AD	1.0 µH
L1201	VPANMR47K0000	J	AD	0.47 µH
L1203	VPANMR47K0000	J	AD	0.47 µH
L1251	VPANMR47K0000	J	AD	0.47 µH
L1601	VP-NM2R2M0000	J	AD	2.2 µH
L1701,1702	VP-1M4R7J0000	J	AD	4.7 µH
L1801	RCILR0603AFZZ	J	AE	100 µH,Choke
L1802	RCILR0568AFZZ	J	AE	68 µH
L1950	RCILZ0279AFZZ	J	AE	1 µH
L1960	VPANM1R0J0000	J	AC	1 µH
LB102	VP-MK100K0000	J	AB	10 µH,Choke
LB103	VP-DH101K0000	J	AB	100 µH,Choke
LB105	VP-MK100K0000	J	AB	10 µH,Choke
LB107,108	VP-MK100K0000	J	AB	10 µH,Choke
LB109,110	VP-MK220K0000	J	AB	22 µH,Choke
LB151	VPADK470KR47K	J	AB	47 µH
VARIABLE RESISTORS				
VR301	RVR-B0013AWZZ	J	AH	20 kohms (B),Semi-VR [AUX Input Level]
VR751	92LVR-S473NB-M	J	AC	47 kohms (B),Semi-VR [Tracking Error Balance]
VR752	92LVR-S103NB-M	J	AC	10 kohm (B),Semi-VR [Tracking Gain]
VR753	92LVR-S473NB-M	J	AC	47 kohms (B),Semi-VR [Focus Offset]

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
VR754	92LVR-S473NB-M	J	AC	47 kohms (B),Semi-VR [Tracking Offset]
VR1110	RVR-M1105AFZZ	J	AB	68 kohms (B),Semi-VR [Focus Error Balance]

VIBRATORS

X41	92LCRSTL1587B	J	AK	Crystal,4.5 MHz
X801	RCRSP0004AWZZ	J	AF	Crystal,8.46 MHz
X901	RCRM-0012AWZZ	J	AF	Ceramic,4.19 MHz
X902	RCRSP0051AFZZ	J	AK	Crystal,32.768 kHz
XB101	RCRM-0110AFZZ	J	AC	Ceramic,3 MHz
XL1201	RCRSB0309AFZZ	J	AK	Crystal,33.8688 MHz

CAPACITORS

C1	VCTYMN1CY103K	J	AA	0.01 µF,16V
C2	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C3	VCTYMN1CY103K	J	AA	0.01 µF,16V
C4	VCCCMN1HH4R7C	J	AA	4.7 pF (CH),50V
C6	VCCUMN1HJ6R8D	J	AB	6.8 pF (UJ),50V
C7	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C8	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C9	VCCCMN1HH150J	J	AA	15 pF (CH),50V
C11	VCCCMN1HH100J	J	AA	10 pF (CH),50V
C12	VCCSMN1HL150J	J	AA	15 pF,50V
C13	VCKYMN1HB101K	J	AA	100 pF,50V
C14,15	VCTYMN1CX472K	J	AA	0.0047 µF,16V
C16	VCKYMN1HB102K	J	AA	0.001 µF,50V
C17	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C18	VCKYMN1HB102K	J	AA	0.001 µF,50V
C19	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C20	VCCUMN1HJ5R6J	J		5.6 pF (UJ),50V
C21	VCTYPA1EX473M	J	AA	0.047 µF,25V
C22	VCCCMN1HH220J	J	AA	22 pF (CH),50V
C23~25	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C26	RC-GZA476AF1A	J	AB	47 µF,10V,Electrolytic
C28	VCKYMN1HB101K	J	AA	100 pF,50V
C29	VCKYMN1HB331K	J	AA	330 pF,50V
C30	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C31	VCTYPA1EX223K	J	AA	0.022 µF,25V
C32	RC-QZA823AFYJ	J	AC	0.082 µF,50V,Mylar
C33	RC-QZA683AFYJ	J	AB	0.068 µF,50V,Mylar
C34	RC-QZA823AFYJ	J	AC	0.082 µF,50V,Mylar
C35,36	VCTYPA1CX123K	J	AA	0.012 µF,16V
C39	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C40	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C41	VCTYBT1CY103M	J	AA	0.01 µF,16V
C42	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C43	VCCUMN1HJ180J	J	AA	18 pF (UJ),50V
C44	VCCCMN1HH180J	J	AA	18 pF (CH),50V
C45	VCCSPA1HL471J	J	AA	470 pF,50V
C46	VCKYMN1HB221K	J	AA	220 pF,50V
C47	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C48	VCCSMN1HL150J	J	AA	15 pF,50V
C49	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C50	VCTYMN1CX222K	J	AA	0.0022 µF,16V
C51	VCKYMN1HB102K	J	AA	0.001 µF,50V
C52	VCTYMN1CX222K	J	AA	0.0022 µF,16V
C53	VCCCMN1HH120J	J	AA	12 pF (CH),50V
C54	VCCCMN1HH150J	J	AA	15 pF (CH),50V
C55	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C56	VCKYMN1HB102K	J	AA	0.001 µF,50V
C57	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C58	VCKYMN1HB102K	J	AA	0.001 µF,50V
C59	VCKYMN1HB331K	J	AA	330 pF,50V
C61	VCKYMN1HB221K	J	AA	220 pF,50V
C71~74	VCTYMN1CX332K	J	AA	0.0033 µF,16V
C75,76	VCTYMN1CX682K	J	AA	0.0068 µF,16V
C81,82	VCKYMN1HB221K	J	AA	220 pF,50V
C83~85	VCKYMN1HB101K	J	AA	100 pF,50V
C86,87	VCCSMN1HL560J	J	AA	56 pF,50V
C88	VCKYMN1HB221K	J	AA	220 pF,50V
C89	VCCSPA1HL101J	J	AA	100 pF,50V
C301,302	VCKYMN1HB101K	J	AA	100 pF,50V
C303,304	VCKYMN1HB221K	J	AA	220 pF,50V
C305,306	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C307,308	VCKYMN1HB221K	J	AA	220 pF,50V
C309,310	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C311,312	RC-GZA227AF1C	J	AB	220 µF,16V,Electrolytic
C313,314	VCKYMN1HB681K	J	AA	680 pF,50V
C315,316	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
C317,318	VCKYMN1HB101K	J	AA	100 pF,50V
C319~322	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C323	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C351~356	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C357,358	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C359,360	VCKYMN1HB221K	J	AA	220 pF,50V
C361,362	VCTYPA1CX104K	J	AB	0.1 µF,16V
C363,364	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C365,366	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C367,368	VCTYPA1CX123K	J	AA	0.012 µF,16V
C369,370	VCTYPA1CX683K	J	AA	0.068 µF,16V
C371,372	VCTYPA1CX123K	J	AA	0.012 µF,16V
C373,374	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C375,376	RC-GZA334AF1H	J	AA	0.33 µF,50V,Electrolytic
C381	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C382,383	VCKYMN1HB101K	J	AA	100 pF,50V
C384	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C385	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C386	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C387	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C390	RC-GZA477AF1A	J	AC	470 µF,10V,Electrolytic
C401,402	VCKYMN1HB331K	J	AA	330 pF,50V
C403,404	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C405,406	VCTYPA1CX273K	J	AA	0.027 µF,16V
C407,408	RC-QZA104AFYJ	J	AC	0.1 µF,50V,Mylar
C431	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C451,452	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C453,454	VCKYMN1HB101K	J	AA	100 pF,50V
C455,456	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C457,458	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C501,502	RC-GZA104AF1H	J	AB	0.1 µF,50V,Electrolytic
C503,504	VCKYMN1HB102K	J	AA	0.001 µF,50V
C505~508	RC-QZA104AFYJ	J	AC	0.1 µF,50V,Mylar
C512	RC-GZA107AF1C	J	AB	100 µF,16V,Electrolytic
C513	RC-GZA336AF1C	J	AB	33 µF,16V,Electrolytic
C514,515	RC-GZ0059AFZZ	J	AF	4700 µF,25V,Electrolytic
C517,518	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C531	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C532	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C551	VCCSMN1HL470J	J	AA	47 pF,50V
C558	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C559	RC-GZA227AF1E	J	AB	220 µF,25V,Electrolytic
C560	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C561	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C562	RC-GZA476AF1A	J	AB	47 µF,10V,Electrolytic
C564~567	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C568	RC-GZA477AF1A	J	AC	470 µF,10V,Electrolytic
C569	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C572	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C573,574	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C575	RC-EZ0001AWZZ	J	AK	0.22 µF,5.5V,Electrolytic
C580	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C601~604	RC-QZA104AFYJ	J	AC	0.1 µF,50V,Mylar
C611	VCKYPA1HF103Z	J	AB	0.01 µF,16V
C612	RC-GZV227AF1H	J	AC	220 µF,50V,Electrolytic
C613	RC-GZA106AF1H	J	AB	10 µF,50V,Electrolytic
C614	VCKYPA1HF103Z	J	AB	0.01 µF,16V
C615	RC-GZA336AF1V	J	AB	33 µF,35V,Electrolytic
C616	VCKYPA1HF103Z	J	AB	0.01 µF,16V
C617	VCKYPA1HB222K	J	AA	0.0022 µF,50V
C701	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C702	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C703,704	VCKYTV1HB223K	J	AA	0.022 µF,50V
C750	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C751	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C752,753	VCCCTV1HH121J	J	AA	120 pF (CH),50V
C755	VCKYTV1HB332K	J	AA	0.0033 µF,50V
C756	VCKYTV1HB822K	J	AA	0.0082 µF,50V
C757	VCKYTV1CE154M	J	AA	0.15 µF,16V
C758	VCKYTV1CE334M	J	AA	0.33 µF,16V
C759	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C760	VCKYTV1CB104K	J	AA	0.1 µF,16V
C761	VCKYTV1HB223K	J	AA	0.022 µF,50V
C762	VCKYTV1CB104K	J	AA	0.1 µF,16V
C763	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C764	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C765	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C766	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C767	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C768	RC-GZA226AF1C	J	AB	22 µF,16V,Electrolytic
C769	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C770	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic

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NO.	PART CODE	★	PRICE RANK	DESCRIPTION
C771	VCKYTV1CB683K	J	AB	0.068 µF,16V
C772	VCKYTV1HB333K	J	AA	0.033 µF,50V
C773	VCKYTV1HB102K	J	AA	0.001 µF,50V
C774	VCCCTV1HH9R0D	J	AA	9 pF (CH),50V
C780	VCKYTV1HB102K	J	AA	0.001 µF,50V
C801	VCKYTV1CF105Z	J	AB	1 µF,16V
C802	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C803	VCKYPA1HB271K	J	AA	270 pF,50V
C804	VCKYTV1HB471K	J	AA	470 pF,50V
C805	VCFYDA1HA564J	J	AE	0.56 µF,50V,Thin Film
C806	VCKYTV1HB102K	J	AA	0.001 µF,50V
C807	VCKYTV1HB223K	J	AA	0.022 µF,50V
C808	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C809	RC-GZA476AF1A	J	AB	47 µF,10V,Electrolytic
C810	VCKYTV1HB222K	J	AA	0.0022 µF,50V
C811	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C817	VCCCTV1HH100D	J	AA	10 pF (CH),50V
C819	VCTYPA1CX103K	J	AA	0.01 µF,16V
C822,823	VCCCTV1HH100D	J	AA	10 pF (CH),50V
C901	VCKYTV1CF105Z	J	AB	1 µF,16V
C902	VCKYTV1EF103Z	J	AA	0.01 µF,25V
C903	VCKYTV1CF105Z	J	AB	1 µF,16V
C904	VCCCTV1HH560J	J	AA	56 pF (CH),50V
C905	VCCCTV1HH120J	J	AA	12 pF (CH),50V
C906,907	VCKYTV1CB104K	J	AA	0.1 µF,16V
C908	RC-EZD105AF1H	J	AB	1 µF,50V,Electrolytic
C910~913	RC-EZD105AF1H	J	AB	1 µF,50V,Electrolytic
C914	VCKYTV1HB561K	J	AA	560 pF,50V
C918	VCCCTV1HH181J	J	AB	180 pF (CH),50V
C919	VCCCTV1HH470J	J	AA	47 pF (CH),50V
C920	VCCCTV1HH560J	J	AA	56 pF (CH),50V
C921	VCCCTV1HH121J	J	AA	120 pF (CH),50V
C923	VCKYTV1HB101K	J	AA	100 pF,50V
C927	VCKYTV1HB561K	J	AA	560 pF,50V
C930	VCKYPU1HB102K	J	AA	0.001 µF,50V
C931,932	VCKYPU1HB471K	J	AA	470 pF,50V
C975	VCKYTV1HB101K	J	AA	100 pF,50V
C1100	VCKYTV1CF225Z	J	AC	2.2 µF,16V
C1101	VCKYTV1CF105Z	J	AB	1 µF,16V
C1104	VCCCCY1HH3R0C	J	AA	3 pF (CH),50V
C1105	VCCCCY1HH221J	J	AA	220 pF (CH),50V
C1108,1109	VCCCCY1HH8R0D	J	AA	8 pF (CH),50V
C1110	VCKYTQ1CF225Z	J	AB	2.2 µF,16V
C1111	VCKYTQ1CB474K	J	AC	0.47 µF,16V
C1112	VCKYTQ1CF225Z	J	AB	2.2 µF,16V
C1114,1115	VCCCCY1HH120J	J	AA	12 pF (CH),50V
C1120	VCKYTQ1CF225Z	J	AB	2.2 µF,16V
C1122	VCKYTQ1CB105K	J	AD	1 µF,16V
C1124	VCKYTQ1CF225Z	J	AB	2.2 µF,16V
C1125	VCCCCY1HH221J	J	AA	220 pF (CH),50V
C1126	VCCCCY1HH101J	J	AA	100 pF (CH),50V
C1127	VCKYTV1CF105Z	J	AB	1 µF,16V
C1128	VCKYCY1HB391K	J	AA	390 pF,50V
C1129	VCKYCY1HB331K	J	AA	330 pF,50V
C1130	VCKYCY1HB332K	J	AA	0.0033 µF,50V
C1131	VCKYCY1HB331K	J	AA	330 pF,50V
C1132,1133	VCKYTQ1CB105K	J	AD	1 µF,16V
C1134,1135	VCKYCY1CB223K	J	AA	0.022 µF,16V
C1136,1137	VCKYCY1HB682K	J	AA	0.0068 µF,50V
C1138	VCCCCY1HH100D	J	AA	10 pF (CH),50V
C1139	VCKYTV1CB104K	J	AA	0.1 µF,16V
C1140	VCKYTQ1CB105K	J	AD	1 µF,16V
C1141	VCKYTQ1CF225Z	J	AB	2.2 µF,16V
C1142,1143	VCKYTQ1CB105K	J	AD	1 µF,16V
C1144	VCCCCY1HH6R0C	J	AA	6 pF (CH),50V
C1145	VCKYCY1CB333K	J	AA	0.033 µF,16V
C1146	VCKYTQ1CB105K	J	AD	1 µF,16V
C1147	VCKYCY1CB473K	J	AA	0.047 µF,16V
C1148	VCCCCY1HH2R0C	J	AA	2 pF (CH),50V
C1201	VCCCCY1HH330J	J	AA	33 pF (CH),50V
C1202	VCKYTV1CB474K	J	AC	0.47 µF,16V
C1203	VCKYTV1CF105Z	J	AB	1 µF,16V
C1204,1205	VCCCCY1HH120J	J	AA	12 pF (CH),50V
C1206	VCKYTV1CF105Z	J	AB	1 µF,16V
C1208	VCKYCY1CB473K	J	AA	0.047 µF,16V
C1209,1210	VCKYTV1CB474K	J	AC	0.47 µF,16V
C1251	VCKYCY1CB273K	J	AA	0.027 µF,16V
C1252	VCCCTV1HH121J	J	AA	120 pF (CH),50V
C1253~1255	VCKYTQ1CF225Z	J	AB	2.2 µF,16V
C1401,1402	VCKYCY1CB473K	J	AA	0.047 µF,16V
C1405	VCKYCY1EF104Z	J	AA	0.1 µF,25V
C1406	VCKYTV1CF105Z	J	AB	1 µF,16V

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
C1412	VCKYCY1HB681K	J	AA	680 pF,50V
C1421	VCKYCY1CB223K	J	AA	0.022 µF,16V
C1422,1423	VCKYCY1CB223K	J	AA	0.022 µF,16V
C1424	VCKYCY1CB223K	J	AA	0.022 µF,16V
C1460	VCKYTV1CF105Z	J	AB	1 µF,16V
C1601	VCKYTV1CF225Z	J	AC	2.2 µF,16V
C1631	VCKYTV1CF105Z	J	AB	1 µF,16V
C1650~1653	VCCSCY1HL821J	J	AA	820 pF,50V
C1654,1655	VCKYCY1HB472K	J	AA	0.0047 µF,50V
C1656,1657	VCKYCY1HB562K	J	AA	0.0056 µF,50V
C1658,1659	VCKYCY1EF104Z	J	AA	0.1 µF,25V
C1661	VCEAPS107AF1A	J	AD	100 µF,10V,Electrolytic
C1700	VCKYTQ1CF225Z	J	AB	2.2 µF,16V
C1701	VCKYTV1CF105Z	J	AB	1 µF,16V
C1702	VCKYTV1CF224Z	J	AB	0.22 µF,16V
C1703	VCEAPS476AF0G	J	AC	47 µF,4V,Electrolytic
C1704,1705	VCCCCY1HH181J	J	AA	180 pF (CH),50V
C1706,1707	VCEAPS226AF0G	J	AC	22 µF,4V,Electrolytic
C1708	VCKYTV1CF224Z	J	AB	0.22 µF,16V
C1709	VCKYCY1CB223K	J	AA	0.022 µF,16V
C1710	VCEAPS226AF0G	J	AC	22 µF,4V,Electrolytic
C1711	VCKYTV1CF224Z	J	AB	0.22 µF,16V
C1712	VCKYCY1HB222K	J	AA	0.0022 µF,50V
C1714	VCKYCY1HB222K	J	AA	0.0022 µF,50V
C1716,1717	VCKYTV1CF224Z	J	AB	0.22 µF,16V
C1718	VCEAPS226AF0G	J	AC	22 µF,4V,Electrolytic
C1722	VCCCCY1HH221J	J	AA	220 pF (CH),50V
C1724	VCCCCY1HH221J	J	AA	220 pF (CH),50V
C1729	VCCCCY1HH221J	J	AA	220 pF (CH),50V
C1730	VCKYTV1CF474Z	J	AB	0.47 µF,16V
C1731,1732	VCEAPS226AF1A	J	AD	22 µF,10V,Electrolytic
C1741	VCKYCY1EF104Z	J	AA	0.1 µF,25V
C1742,1743	VCEAPS476AF0G	J	AC	47 µF,4V,Electrolytic
C1804	VCKYCY1HB122K	J	AA	0.0012 µF,50V
C1805	RC-EZ1623AFZZ	J	AF	22 µF,10V,Electrolytic
C1808	RC-EZ1658AFZZ	J	AD	47 µF,25V,Electrolytic
C1809	VCKYTV1CF105Z	J	AB	1 µF,16V
C1810	VCKYCY1HB272K	J	AA	0.0027 µF,50V
C1811	VCCCCY1HH221G	J	AB	220 pF (CH),50V
C1819	RC-EZ1653AFZZ	J	AF	33 µF,63V,Electrolytic
C1820	VCKYCY1HB152K	J	AA	0.0015 µF,50V
C1825	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C1826	VCKYTV1CB474K	J	AC	0.47 µF,16V
C1827	VCKYTV1CF474Z	J	AB	0.47 µF,16V
C1828	VCKYCY1HB272K	J	AA	0.0027 µF,50V
C1829	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C1830	VCEAPS226AF0G	J	AC	22 µF,4V,Electrolytic
C1831	VCKYTV1CF105Z	J	AB	1 µF,16V
C1833	VCKYCY1HB272K	J	AA	0.0027 µF,50V
C1834	RC-EZ1657AFZZ	J	AD	33 µF,25V,Electrolytic
C1835	VCKYCY1EF104Z	J	AA	0.1 µF,25V
C1836	VCCCCY1HH5R0C	J	AA	5 pF (CH),50V
C1838,1839	VCKYTQ1EF225Z	J	AD	2.2 µF,25V
C1901	VCKYTV1CF105Z	J	AB	1 µF,16V
C1902	VCKYTV1CF474Z	J	AB	0.47 µF,16V
C1903	VCKYTV1CF105Z	J	AB	1 µF,16V
C1904	VCKYTQ1CB334K	J	AC	0.33 µF,16V
C1966	VCKYCY1HB391K	J	AA	390 pF,50V
CA103,104	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
CA105	RC-GZA107AF1C	J	AB	100 µF,16V,Electrolytic
CA106	RC-GZA337AF1C	J	AC	330 µF,16V,Electrolytic
CA107	VCKZPA1HF223Z	J	AA	0.022 µF,50V
CA108	RC-GZA474AF1H	J	AA	0.47 µF,50V,Electrolytic
CA109	VCTYPU1CX472K	J	AA	0.0047 µF,16V
CA110	RC-QZA224AFYJ	J	AB	0.22 µF,50V,Mylar
CA111	RC-QZA683AFYJ	J	AB	0.068 µF,50V,Mylar
CA112	RC-QZA223AFYJ	J	AB	0.022 µF,50V,Mylar
CA113	RC-GZA474AF1H	J	AA	0.47 µF,50V,Electrolytic
CA114	RC-QZA682AFYJ	J	AA	0.0068 µF,50V,Mylar
CA115	RC-GZA474AF1H	J	AA	0.47 µF,50V,Electrolytic
CA116	RC-QZA182AFYJ	J	AB	0.0018 µF,50V,Mylar
CA117	RC-QZA224AFYJ	J	AB	0.22 µF,50V,Mylar
CA118	VCCSPA1HL331J	J	AA	330 pF,50V
CA119	RC-GZA107AF1C	J	AB	100 µF,16V,Electrolytic
CA120	RC-GZA334AF1H	J	AA	0.33 µF,50V,Electrolytic
CA121,122	RC-GZA474AF1H	J	AA	0.47 µF,50V,Electrolytic
CA123	RC-QZA224AFYJ	J	AB	0.22 µF,50V,Mylar
CA124	VCKZPA1HF223Z	J	AA	0.022 µF,50V
CA125,126	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
CA128	VCKZPA1HF223Z	J	AA	0.022 µF,50V
CA129,130	VCKYPA1HB151K	J	AA	150 pF,50V
CA131	VCKYPA1HB391K	J	AA	390 pF,50V

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CA132	VCKZPA1HF223Z	J	AA	0.022 µF,50V
CA133,134	RC-GZA475AF1H	J	AB	4.7 µF,50V,Electrolytic
CA135,136	VCTYPA1CX393K	J	AB	0.039 µF,16V
CB102	VCCSPA1HL101J	J	AA	100 pF,50V
CB103	VCKYPA1HB471K	J	AA	470 pF,50V
CB104	VCCSPA1HL101J	J	AA	100 pF,50V
CB105	VCKYPA1HB471K	J	AA	470 pF,50V
CB106	RC-GZA107AF1C	J	AB	100 µF,16V,Electrolytic
CB107~114	VCCSPA1HL101J	J	AA	100 pF,50V
CB120	VCCSPA1HL101J	J	AA	100 pF,50V
CB121	RC-GZA107AF1C	J	AB	100 µF,16V,Electrolytic
CB123	RC-QZA473AFYJ	J	AB	0.047 µF,50V,Mylar
CB125~127	VCCSPA1HL101J	J	AA	100 pF,50V
CB130	RC-QZA473AFYJ	J	AB	0.047 µF,50V,Mylar
CB132	VCCSPA1HL101J	J	AA	100 pF,50V
CB133,134	RC-QZA104AFYJ	J	AC	0.1 µF,50V,Mylar
CB140,141	RC-QZA104AFYJ	J	AC	0.1 µF,50V,Mylar
CB151	VCKYPU1HB271K	J	AA	270 pF,50V
CB152	VCKYPU1HB471K	J	AA	470 pF,50V
CB153	VCTYPA1CX104K	J	AB	0.1 µF,16V
CJ172	VCCCCY1HH221J	J	AA	220 pF (CH),50V
CJ180	VCCCCY1HH221J	J	AA	220 pF (CH),50V

RESISTORS

	VRD-MN2BD000C	J	AA	0 ohm,Jumper,ø1.4×3.5mm,Ivory
	VRD-SA2CD0R0J	J	AB	0 ohm,Jumper,ø1.9×3.4mm,Red
	VRS-CY1JB000J	J	AA	0 ohm,Jumper,ø0.8×1.55mm, Green
	VRS-TQ2BB000J	J	AA	0 ohm,Jumper,ø1.55×3.1mm, Green
	VRS-TV2AB000J	J	AA	0 ohm,Jumper,ø1.25×2mm, Green
R1	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R2	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R3	VRD-ST2EE220J	J	AA	22 ohms,1/4W
R4,5	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R6	VRD-ST2CD681J	J	AA	680 ohms,1/6W
R8	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R9	VRD-ST2EE222J	J	AA	2.2 kohms,1/4W
R10	VRD-MN2BD100J	J	AA	10 ohm,1/8W
R11	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R17	VRD-ST2CD560J	J	AA	56 ohms,1/6W
R18	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R19	VRD-ST2EE470J	J	AA	47 ohms,1/4W
R20	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R23	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R24	VRD-MN2BD393J	J	AA	39 kohms,1/8W
R27	VRD-MN2BD223J	J	AA	22 kohms,1/8W
R28	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R29	VRD-ST2CD393J	J	AA	39 kohms,1/6W
R35,36	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R38	VRD-MN2BD331J	J	AA	330 ohms,1/8W
R39	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R41,42	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R43	VRD-MN2BD683J	J	AA	68 kohms,1/8W
R45	VRD-ST2CD471J	J	AA	470 ohms,1/6W
R47	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R48	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R49	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R50	VRD-ST2EE184J	J	AA	180 kohms,1/4W
R51~54	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R55	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R56	VRD-MN2BD100J	J	AA	10 ohm,1/8W
R58	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R59	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R61,62	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R63	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R69	VRD-MN2BD331J	J	AA	330 ohms,1/8W
R71,72	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R73,74	VRD-MN2BD272J	J	AA	2.7 kohms,1/8W
R75,76	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R77,78	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R79	VRD-ST2EE101J	J	AA	100 ohm,1/4W
R301~304	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R305	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R307,308	VRD-MN2BD123J	J	AA	12 kohms,1/8W
R309,310	VRD-MN2BD393J	J	AA	39 kohms,1/8W
R311,312	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R313,314	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R315~318	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R320	VRD-MN2BD561J	J	AA	560 ohms,1/8W

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R322	VRD-MN2BD561J	J	AA	560 ohms,1/8W
R323	VRD-MN2BD181J	J	AA	180 ohms,1/8W
R324,325	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R328,329	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R331,332	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R351,352	VRD-MN2BD183J	J	AA	18 kohms,1/8W
R353,354	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R355,356	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R357,358	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R359,360	VRD-MN2BD123J	J	AA	12 kohms,1/8W
R361,362	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R363,364	VRD-MN2BD823J	J	AA	82 kohms,1/8W
R365,366	VRD-MN2BD683J	J	AA	68 kohms,1/8W
R367,368	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R369,370	VRD-ST2EE102J	J	AA	1 kohm,1/4W
R371,372	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R380,381	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R384	VRD-MN2BD331J	J	AA	330 ohms,1/8W
R391	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R399	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R401,402	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
R403,404	VRD-MN2BD474J	J	AA	470 kohms,1/8W
R405,406	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R409,410	VRD-MN2BD682J	J	AA	6.8 kohms,1/8W
R411,412	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R415,416	VRD-MN2BD822J	J	AA	8.2 kohms,1/8W
R423,424	VRD-MN2BD272J	J	AA	2.7 kohms,1/8W
R431	VRD-MN2BD181J	J	AA	180 ohms,1/8W
R451,452	VRD-MN2BD563J	J	AA	56 kohms,1/8W
R453,454	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R455,456	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R457	VRD-ST2EE101J	J	AA	100 ohm,1/4W
R458	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R501,502	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R503,504	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R505	VRD-ST2CD2R2J	J	AA	2.2 ohms,1/6W
R506~508	VRD-ST2EE2R2J	J	AA	2.2 ohms,1/4W
R511,512	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R513	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R514	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R519,520	VRD-MN2BD121J	J	AA	120 ohms,1/8W
R523	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R551,552	VRD-MN2BD101J	J	AA	100 ohm,1/8W
⚠R555	RH-QX0002AWZZ	J	AK	Posistor,0.7 ohms
R556,557	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
R563	VRD-MN2BD101J	J	AA	100 ohm,1/8W
⚠R565	RH-QX0003AWZZ	J	AK	Posistor,2.2 ohms
R570,571	VRD-RT2HD1R0J	J	AA	1 ohm,1/2W
⚠R611	RH-QX1067AFZZ	J	AE	Posistor,8.2 ohms
R612	VRD-ST2CD182J	J	AA	1.8 kohms,1/6W
R613	VRD-ST2CD101J	J	AA	100 ohm,1/6W
R614	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R615	VRD-ST2EE333J	J	AA	33 kohms,1/4W
R650	VRD-MN2BD683J	J	AA	68 kohms,1/8W
R651~653	VRD-ST2CD683J	J	AA	68 kohms,1/6W
R654	VRD-MN2BD683J	J	AA	68 kohms,1/8W
R655	VRD-ST2CD683J	J	AA	68 kohms,1/6W
R666	VRD-ST2CD181J	J	AA	180 ohms,1/6W
R701	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R702,703	VRS-TV2AB823J	J	AA	82 kohms,1/10W
R750	VRS-TV2AB184J	J	AA	180 kohms,1/10W
R751	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R753	VRD-ST2EE180J	J	AA	18 ohms,1/4W
R754	VRS-TV2AB470J	J	AA	47 ohms,1/10W
R755,756	VRS-TV2AB223J	J	AA	22 kohms,1/10W
R757	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R758	VRS-TV2AB123J	J	AA	12 kohms,1/10W
R759	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R760	VRS-TV2AB472J	J	AA	4.7 kohms,1/10W
R761	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R762	VRS-TV2AB153J	J	AA	15 kohms,1/10W
R763	VRS-TV2AB274J	J	AA	270 kohms,1/10W
R764	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R765	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R766	VRS-TV2AB221J	J	AA	220 ohms,1/10W
R767	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R768	VRS-TV2AB393J	J	AA	39 kohms,1/10W
R769~771	VRS-TV2AB273J	J	AA	27 kohms,1/10W
R772	VRS-TV2AB823J	J	AA	82 kohms,1/10W
R773	VRS-TV2AB562J	J	AA	5.6 kohms,1/10W
R774	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R775	VRS-TV2AB102J	J	AA	1 kohm,1/10W

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
R776	VRS-TV2AB223J	J	AA	22 kohms,1/10W
R777	VRS-TV2AB333J	J	AA	33 kohms,1/10W
R778	VRS-TV2AB224J	J	AA	220 kohms,1/10W
R779	VRS-TV2AB123J	J	AA	12 kohms,1/10W
R780	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R781	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R786,787	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R789	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R790~793	VRS-TV2AB124J	J	AA	120 kohms,1/10W
R794,795	VRS-TV2AB683J	J	AA	68 kohms,1/10W
R801	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R802	VRS-TV2AB184J	J	AA	180 kohms,1/10W
R803	VRS-TV2AB335J	J	AA	3.3 Mohms,1/10W
R804	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R805	VRS-TV2AB333J	J	AA	33 kohms,1/10W
R807	VRS-TV2AB101J	J	AA	100 ohm,1/10W
R808,809	VRD-ST2CD564J	J	AA	560 kohms,1/6W
R811	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R812	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R813	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R883	VRS-TV2AB331J	J	AA	330 ohms,1/10W
R900	VRS-TV2AB224J	J	AA	220 kohms,1/10W
R901~904	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R906~908	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R910,911	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R913	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R914	VRS-TV2AB821J	J	AA	820 ohms,1/10W
R915~920	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R921	VRD-ST2EE102J	J	AA	1 kohm,1/4W
R922	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R923	VRD-ST2EE102J	J	AA	1 kohm,1/4W
R924	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R926	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R927,928	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R929	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R930,931	VRD-ST2EE102J	J	AA	1 kohm,1/4W
R932	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R933	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R934~936	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R937	VRS-TV2AB182J	J	AA	1.8 kohms,1/10W
R938	VRS-TV2AB475J	J	AA	4.7 Mohms,10W
R939~942	VRS-TV2AB471J	J	AA	470 ohms,1/10W
R943	VRS-TV2AB105J	J	AA	1 Mohm,1/10W
R944	VRS-TV2AB224J	J	AA	220 kohms,1/10W
R951~959	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R960~968	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R969,970	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R973	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R975	VRS-TV2AB471J	J	AA	470 ohms,1/10W
R976	VRS-TV2AB101J	J	AA	100 ohm,1/10W
R977	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R980~983	VRS-TV2AB471J	J	AA	470 ohms,1/10W
R984	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R985,986	VRS-TV2AB474J	J	AA	470 kohms,1/10W
R987,988	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R989	VRD-ST2EE471J	J	AA	470 ohms,1/4W
R990	VRD-ST2CD471J	J	AA	470 ohms,1/6W
R991,992	VRD-ST2EE471J	J	AA	470 ohms,1/4W
R993	VRS-TV2AB474J	J	AA	470 kohms,1/10W
R994	VRD-ST2EE471J	J	AA	470 ohms,1/4W
R995	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R996	VRS-TV2AB471J	J	AA	470 ohms,1/10W
R997	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R998	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R999	VRS-TV2AB471J	J	AA	470 ohms,1/10W
R1000	VRS-TQ2BB120J	J	AA	12 ohms,1/8W
R1100	VRS-TQ2BB150J	J	AA	15 ohms,1/8W
R1110	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R1111	VRS-CY1JB123J	J	AA	12 kohms,1/16W
R1114	VRS-CY1JB223J	J	AA	22 kohms,1/16W
R1115	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1117	VRN-CY1JD124D	J	AA	120 kohms,1/16W,±1%,Metal Film
R1118	VRS-CY1JB123J	J	AA	12 kohms,1/16W
R1120,1121	VRN-CY1JD223D	J	AA	22 kohms,1/16W,±1%,Metal Film
R1122	VRN-CY1JD124D	J	AA	120 kohms,1/16W,±1%,Metal Film
R1123	VRS-CY1JB123J	J	AA	12 kohms,1/16W
R1127	VRN-CY1JD224D	J	AA	220 kohms,1/16W,±1%,Metal Film
R1128	VRS-CY1JB123J	J	AA	12 kohms,1/16W
R1129,1130	VRN-CY1JD473D	J	AA	47 kohms,1/16W,±1%,Metal Film

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
R1131	VRN-CY1JD224D	J	AA	220 kohms,1/16W,±1%,Metal Film
R1133	VRS-CY1JB123J	J	AA	12 kohms,1/16W
R1134,1135	VRS-CY1JB333J	J	AA	33 kohms,1/16W
R1136	VRS-CY1JB471J	J	AA	470 ohms,1/16W
R1140	VRS-CY1JB1R0J	J	AA	1 ohm,1/16W
R1141	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1142	VRS-CY1JB122J	J	AA	1.2 kohms,1/16W
R1143	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1144	VRS-CY1JB391J	J	AA	390 ohms,1/16W
R1146	VRS-CY1JB335J	J	AA	3.3 Mohms,1/16W
R1147,1148	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R1149	VRS-CY1JB393J	J	AA	39 kohms,1/16W
R1153	VRS-CY1JB184J	J	AA	180 kohms,1/16W
R1154	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1155	VRS-CY1JB223J	J	AA	22 kohms,1/16W
R1156	VRS-CY1JB124J	J	AA	120 kohms,1/16W
R1157	VRS-CY1JB561J	J	AA	560 ohms,1/16W
R1158	VRS-CY1JB683J	J	AA	68 kohms,1/16W
R1159,1160	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1161	VRS-CY1JB221J	J	AA	220 ohms,1/16W
R1162	VRS-CY1JB222J	J	AA	2.2 kohms,1/16W
R1163	VRS-CY1JB153J	J	AA	15 kohms,1/16W
R1164	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1166	VRS-CY1JB122J	J	AA	1.2 kohms,1/16W
R1201	VRS-CY1JB151J	J	AA	150 ohms,1/16W
R1202	VRS-CY1JB105J	J	AA	1 Mohm,1/16W
R1210	VRS-CY1JB101J	J	AA	100 ohm,1/16W
R1211	VRS-CY1JB221J	J	AA	220 ohms,1/16W
R1221	VRS-CY1JB221J	J	AA	220 ohms,1/16W
R1223	VRS-TV2AB331J	J	AA	330 ohms,1/10W
R1251	VRS-CY1JB100J	J	AA	10 ohm,1/16W
R1252,1253	VRS-CY1JB4R7J	J	AA	4.7 ohms,1/16W
R1254	VRS-TV2AB221J	J	AA	220 ohms,1/10W
R1401	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1404	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1406	VRS-CY1JB332J	J	AA	3.3 kohms,1/16W
R1409	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1412	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R1413	VRS-CY1JB332J	J	AA	3.3 kohms,1/16W
R1414	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1415	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1416	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1419	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1420	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1421	VRS-CY1JB332J	J	AA	3.3 kohms,1/16W
R1422~1424	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1425	VRS-CY1JB272J	J	AA	2.7 kohms,1/16W
R1426	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1427	VRS-CY1JB472J	J	AA	4.7 kohms,1/16W
R1428	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1429,1430	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1452	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1453	VRS-CY1JB153J	J	AA	15 kohms,1/16W
R1454	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1456	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1458	VRS-CY1JB682J	J	AA	6.8 kohms,1/16W
R1459	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1460	VRS-CY1JB682J	J	AA	6.8 kohms,1/16W
R1461	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1462	VRS-CY1JB682J	J	AA	6.8 kohms,1/16W
R1463	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1464	VRS-CY1JB221J	J	AA	220 ohms,1/16W
R1466	VRS-CY1JB221J	J	AA	220 ohms,1/16W
R1467	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1468~1472	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1473	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R1474~1476	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1605	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R1614	VRN-CY1JD183D	J	AA	18 kohms,1/16W,±1%,Metal Film
R1615	VRS-CY1JB333J	J	AA	33 kohms,1/16W
R1616	VRS-CY1JB513J	J	AA	51 kohms,1/16W
R1620	VRS-CY1JB101J	J	AA	100 ohm,1/16W
R1621,1622	VRS-CY1JB101J	J	AA	100 ohm,1/16W
R1650	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1651	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1652	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1653	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1654	VRS-CY1JB682J	J	AA	6.8 kohms,1/16W
R1655	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1656	VRS-CY1JB682J	J	AA	6.8 kohms,1/16W
R1657	VRS-CY1JB473J	J	AA	47 kohms,1/16W

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
R1658	VRS-CY1JB183J	J	AA	18 kohms,1/16W
R1659	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1660	VRS-CY1JB183J	J	AA	18 kohms,1/16W
R1661	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1662	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1663	VRS-CY1JB333J	J	AA	33 kohms,1/16W
R1664	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1665	VRS-CY1JB333J	J	AA	33 kohms,1/16W
R1701	VRS-CY1JB1R0J	J	AA	1 ohm,1/16W
R1702	VRS-CY1JB220J	J	AA	22 ohms,1/16W
R1703,1704	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1705,1706	VRS-CY1JB303J	J	AA	30 kohms,1/16W
R1707~1709	VRS-CY1JB273J	J	AA	27 kohms,1/16W
R1710	VRS-CY1JB303J	J	AA	30 kohms,1/16W
R1711	VRS-CY1JB393J	J	AA	39 kohms,1/16W
R1713	VRS-CY1JB1R0J	J	AA	1 ohm,1/16W
R1715	VRN-CY1JD332D	J	AA	3.3 kohms,1/16W,±1%,Metal Film
R1716	VRN-CY1JD123D	J	AB	12 kohms,1/16W,±1%,Metal Film
R1717	VRS-CY1JB181J	J	AA	180 ohms,1/16W
R1718	VRS-CY1JB273J	J	AA	27 kohms,1/16W
R1719	VRS-CY1JB182J	J	AA	1.8 kohms,1/16W
R1720	VRS-CY1JB1R0J	J	AA	1 ohm,1/16W
R1721,1722	VRS-CY1JB1R0J	J	AA	1 ohm,1/16W
R1723	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1731	VRS-CY1JB470J	J	AA	47 ohms,1/16W
R1733	VRS-CY1JB470J	J	AA	47 ohms,1/16W
R1734,1735	VRS-CY1JB473J	J	AA	47 kohms,1/16W
R1746,1747	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R1750,1751	VRS-TV2AB121J	J	AA	120 ohms,1/10W
R1804	VRN-CY1JD392D	J	AA	3.9 kohms,1/16W,±1%,Metal Film
R1805	VRN-CY1JD272D	J	AA	2.7 kohms,1/16W,±1%,Metal Film
R1806,1807	VRS-CY1JB122J	J	AA	1.2 kohms,1/16W
R1811	VRS-TV2AB391J	J	AA	390 ohms,1/10W
R1812	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R1820	VRS-CY1JB681J	J	AA	680 ohms,1/16W
R1821	VRS-CY1JB821J	J	AA	820 ohms,1/16W
R1822	VRN-CY1JD392D	J	AA	3.9 kohms,1/16W,±1%,Metal Film
R1823	VRN-CY1JD153D	J	AA	15 kohms,1/16W,±1%,Metal Film
R1825	VRS-CY1JB122J	J	AA	1.2 kohms,1/16W
R1826	VRS-CY1JB273J	J	AA	27 kohms,1/16W
R1830~1835	VRS-CY1JB1R0J	J	AA	1 ohm,1/16W
R1836	VRS-CY1JB101J	J	AA	100 ohm,1/16W
R1837	VRS-CY1JB223J	J	AA	22 kohms,1/16W
R1841	VRN-CY1JD273D	J	AA	27 kohms,1/16W,±1%,Metal Film
R1842	VRS-CY1JB273J	J	AA	27 kohms,1/16W
R1843	VRS-CY1JB682J	J	AA	6.8 kohms,1/16W
R1845	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1846	VRS-CY1JB123J	J	AA	12 kohms,1/16W
R1847	VRS-CY1JB243J	J	AA	24 kohms,1/16W
R1855	VRS-CY1JB393J	J	AA	39 kohms,1/16W
R1856	VRS-CY1JB154J	J	AA	150 kohms,1/16W
R1859	VRN-CY1JD392D	J	AA	3.9 kohms,1/16W,±1%,Metal Film
R1860	VRS-CY1JB272J	J	AA	2.7 kohms,1/16W
R1861	VRS-CY1JB123J	J	AA	12 kohms,1/16W
R1901	VRS-TV2AB471J	J	AA	470 ohms,1/10W
R1902	VRS-TV2AB182J	J	AA	1.8 kohms,1/10W
R1903,1904	VRS-TV2AB821J	J	AA	820 ohms,1/10W
R1928	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R1960	VRS-TV2AB220J	J	AA	22 ohms,1/10W
R1973	VRS-CY1JB682J	J	AA	6.8 kohms,1/16W
R1974	VRS-CY1JB221J	J	AA	220 ohms,1/16W
R1994,1995	VRS-CY1JB101J	J	AA	100 ohm,1/16W
R2001	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R2002	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R2003	VRD-ST2EE182J	J	AA	1.8 kohms,1/4W
R2004	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R2005	VRD-ST2EE332J	J	AA	3.3 kohms,1/4W
R2006	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R2007	VRD-ST2CD822J	J	AA	8.2 kohms,1/6W
R2008	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R2009	VRD-ST2CD563J	J	AA	56 kohms,1/6W
R2011	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R2012	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R2013	VRD-ST2CD182J	J	AA	1.8 kohms,1/6W
R2014	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R2015	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R2016	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W

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R2017	VRD-ST2CD822J	J	AA	8.2 kohms,1/6W
R2018	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R2019	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R2020	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R2021	VRD-ST2CD182J	J	AA	1.8 kohms,1/6W
R2022	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R2023	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R2024	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R2025	VRD-ST2CD822J	J	AA	8.2 kohms,1/6W
RA105,106	VRD-ST2CD392J	J	AA	3.9 kohms,1/6W
RA107,108	VRD-ST2CD123J	J	AA	12 kohms,1/6W
RA109~112	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RA114~116	VRD-ST2CD103J	J	AA	10 kohm,1/6W
RA117	VRD-ST2CD331J	J	AA	330 ohms,1/6W
RA118	VRD-ST2CD223J	J	AA	22 kohms,1/6W
RA119	VRD-ST2CD473J	J	AA	47 kohms,1/6W
RA120	VRD-ST2CD392J	J	AA	3.9 kohms,1/6W
RA121	VRD-ST2CD333J	J	AA	33 kohms,1/6W
RA122	VRD-ST2CD104J	J	AA	100 kohm,1/6W
RA123	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
RA124	VRD-ST2CD104J	J	AA	100 kohm,1/6W
RA125,126	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
RA127	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
RA128	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
RA129	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RA130	VRD-ST2CD104J	J	AA	100 kohm,1/6W
RA131	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RA132	VRD-ST2CD104J	J	AA	100 kohm,1/6W
RA133	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
RA134	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
RA135	VRD-ST2CD682J	J	AA	6.8 kohms,1/6W
RA141,142	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
RA143,144	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
RA145~147	VRD-ST2CD103J	J	AA	10 kohm,1/6W
RA148,149	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RB103	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RB105	VRD-ST2CD104J	J	AA	100 kohm,1/6W
RB106	VRD-ST2CD224J	J	AA	220 kohms,1/6W
RB107	VRD-ST2CD104J	J	AA	100 kohm,1/6W
RB108	VRD-ST2CD224J	J	AA	220 kohms,1/6W
RB109~112	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RB113~120	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
RB121~128	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RB133	VRD-ST2CD103J	J	AA	10 kohm,1/6W
RB139,140	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RB141	VRD-RT2HD1R0J	J	AA	1 ohm,1/2W
RB142	VRD-ST2CD272J	J	AA	2.7 kohms,1/6W
RB143	VRD-ST2CD822J	J	AA	8.2 kohms,1/6W
RB144	VRD-ST2CD103J	J	AA	10 kohm,1/6W
RB145	VRD-ST2CD682J	J	AA	6.8 kohms,1/6W
RB146~148	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RB149	VRD-RT2HD1R0J	J	AA	1 ohm,1/2W
RB150	VRD-ST2CD272J	J	AA	2.7 kohms,1/6W
RB151	VRD-ST2CD822J	J	AA	8.2 kohms,1/6W
RB152	VRD-ST2CD103J	J	AA	10 kohm,1/6W
RB153	VRD-ST2CD183J	J	AA	18 kohms,1/6W
RB161	VRD-ST2CD224J	J	AA	220 kohms,1/6W
RC120	VRS-CY1JB221J	J	AA	220 ohms,1/16W

OTHER CIRCUITRY PARTS

BI301/CNS902	QCNWN0807AWZZ	J	AE	Connector Ass'y,6-6Pin
BI551/CNS601	QCNWN0806AWZZ	J	AF	Connector Ass'y,6-6Pin
BI553/CNSA4	QCNWN0854AWZZ	J	AH	Connector Ass'y,7-7Pin
BI554/CNSA2	QCNWN0855AWZZ	J	AF	Connector Ass'y,9-9Pin
BI800/CNS553	QCNWN0989AWZZ	J		Connector Ass'y,2-2Pin
BI851/CNS552	QCNWN0988AWZZ	J	AF	Connector Ass'y,8-6Pin
BI1902/CNS1602	QCNWN6436AFZZ	J	AF	Connector Ass'y,5-5Pin
BI2001/CNS901	QCNWN0847AWZZ	J	AF	Connector Ass'y,6-6Pin
BIB101/CNS904	QCNWN0850AWZZ	J	AE	Connector Ass'y,6-5Pin
BIB102/CNS555	QCNWN0851AWZZ	J	AE	Connector Ass'y,5-4Pin
BIB104/CNSB2	QCNWN0853AWZZ	J	AF	Connector Ass'y,5-5Pin
BM953	QCNCM007PAWZZ	J	AF	Plug,14Pin
BM954	QCNCM007MAWZZ	J	AE	Plug,12Pin
BW553	QCNCW007PAWZZ	J	AF	Socket,14Pin
BW554	QCNCW007MAWZZ	J	AE	Socket,12Pin
CNP2	92LCONE-2P5268	J	AB	Plug,2Pin
CNP3	92LCONE2P53253	J	AB	Plug,2Pin
CNP502	92LCONE4P5267X	J	AB	Plug,4Pin
CNP552	92LCONE6P53253	J	AC	Plug,6Pin
CNP553	92LCONE2P53253	J	AB	Plug,2Pin
CNP554	92LCONPB2BPHK	J	AB	Plug,2Pin

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NO.	PART CODE	★	PRICE RANK	DESCRIPTION
CNP555	92LCONE4P53253	J	AB	Plug,4Pin
CNP556	QCNCWZJ24AWZZ	J	AK	Socket,24Pin
CNP601	92LCONE6P5268	J	AC	Plug,6Pin
CNP700A	92LCONE6P53253	J	AC	Plug,6Pin
CNP700B	92LCONE6P53254	J	AC	Plug,6Pin
CNP751	92LCONPB8BPHK	J	AC	Plug,8Pin
CNP752	92LCONPB7BPHK	J	AC	Plug,7Pin
CNP901	92LCONPB6BPHK	J	AB	Plug,6Pin
CNP902	92LCONPS6BPHK	J	AC	Plug,6Pin
CNP903	92LCONPS10BPHK	J	AE	Plug,10Pin
CNP904	92LCONE5P53253	J	AB	Plug,5Pin
CNP1252	QCNCM891BAFZZ	J	AC	Plug,2Pin
CNP1601	QCNCM891EAFZZ	J	AD	Plug,5Pin
CNP1602	QCNCM890EAFZZ	J	AD	Plug,5Pin
CNP1901	QCNCM924EAFZZ	J	AD	Plug,5Pin
CNP1904	QCNCM891DAFZZ	J	AD	Plug,4Pin
CNPA2	92LCONE9P53253	J	AC	Plug,9Pin
CNPA4	92LCONE7P53253	J	AC	Plug,7Pin
CNPB1	92LCONE6P53253	J	AC	Plug,6Pin
CNPB2	92LCONE5P53253	J	AB	Plug,5Pin
CNS3	QCNWN0970AWZZ	J	AC	Connector Ass'y,2-1Pin
CNS502	QCNWN0805AWZZ	J	AE	Connector Ass'y,4Pin
CNS552	QCNWN0001AWZZ	J	AF	Connector Ass'y,5Pin
CNS700A/B	92LCONE6P53253	J	AC	Connector Ass'y,6-6Pin
CNS751A/B	QCNCM705HAFZZ	J	AB	Connector Ass'y,8-8Pin
CNS752A/B	QCNCM705GAFZZ	J	AB	Connector Ass'y,7-7Pin
CNS903	QCNWN0848AWZZ	J	AF	Connector Ass'y,10Pin
CNS1101	QCNCWY026AFZZ	J	AH	Socket,26Pin
CNS1252	QCNWN6504AFZZ	J	AD	Connector Ass'y,2Pin
CNS1601A/B	QCNWN6437AFZZ	J	AG	Connector Ass'y,5-5Pin
CNS1901	QCNCMZE24AFZZ	J	AG	Socket,24Pin
CNS1904A/B	QCNWN0971AWZZ	J	AF	Connector Ass'y,2-4Pin
CNSB1	QCNWN0852AWZZ	J	AE	Connector Ass'y,6Pin
⚠F601	92LFUSE-T402E	J	AD	Fuse,T4A L 250V
FL901	VVK16BT45G/-1	J	BA	FL Display
FW557	QCNWN0804AWZZ	J	AG	Flat Wire,13Pin
FW2001	QCNWN0809AWZZ	J	AC	Flat Wire,5Pin
FW2002	QCNWN0810AWZZ	J	AC	Flat Wire,4Pin
J301	92LJACKH1759A	J	AF	Jack,Monitor Output
J302	92LJACKH1759A	J	AF	Jack,AUX Input
J303	92LJACKH1759A	J	AF	Jack,MIC Input
J501	92LJACKH1759A	J	AF	Jack,Headphones
M701	92LMTR1854CASY	J	AS	Motor with Chassis [Spin]
M702	92LMTR1854BASY	J	AP	Motor with Gear [Slide]
M1951	RMOTV0464AFZZ	J	AP	MD Slide Motor Ass'y
M1952	RMOTV0472AFZZ	J	AU	MD Disc Motor Ass'y
M1953	RMOTV0465AFZZ	J	AP	MD Loading/Head Motor Ass'y
MOB1	RMOTV0373AFM1	J	AQ	Main Cam Motor Ass'y
MOB2	RMOTV0373AFM1	J	AQ	Tray Motor Ass'y
⚠SOC601	QSOCA0202AWZZ	J	AL	Socket,AC Power Supply Input
SP501,502	VSP0010PBS58A	J	AS	Speaker
SW551	QSW-K0064AFZZ	J	AC	Switch,Key Type [Reset]
SW702	QSW-F9001AWZZ	J	AE	Switch,Push Type [Pickup In]
SW1951A/B	QSW-P1005AFZZ	J	AF	Switch,Push Type [Disc Protect/Disc Media]
SW1953	QSW-M0157AFZZ	J	AD	Switch,Slide Type [Lead In]
SW1954	QSW-M0159AFZZ	J	AC	Switch,Push Type [MD Play]
SW1955	QSW-M0159AFZZ	J	AC	Switch,Push Type [MD Record]
SW1956	QSW-M0156AFZZ	J	AC	Switch,Leaf Type [Loading]
SW2001	QSW-K0003AWZZ	J	AD	Switch,Key Type [Power]
SW2002	QSW-K0003AWZZ	J	AD	Switch,Key Type [CD Play/Pause]
SW2003	QSW-K0003AWZZ	J	AD	Switch,Key Type [CD Stop]
SW2004	QSW-K0003AWZZ	J	AD	Switch,Key Type [Tuner (Band)]
SW2005	QSW-K0003AWZZ	J	AD	Switch,Key Type [Volume Up]
SW2006	QSW-K0003AWZZ	J	AD	Switch,Key Type [Volume Down]
SW2008	QSW-K0003AWZZ	J	AD	Switch,Key Type [Name/Toc Edit]
SW2009	QSW-K0003AWZZ	J	AD	Switch,Key Type [Display]
SW2010	QSW-K0003AWZZ	J	AD	Switch,Key Type [Timer/Delete]
SW2011	QSW-K0003AWZZ	J	AD	Switch,Key Type [Track Edit]
SW2012	QSW-K0003AWZZ	J	AD	Switch,Key Type [Edit Start]
SW2013	QSW-K0003AWZZ	J	AD	Switch,Key Type [MD Play/Pause]
SW2014	QSW-K0003AWZZ	J	AD	Switch,Key Type [MD Stop]
SW2015	QSW-K0003AWZZ	J	AD	Switch,Key Type [MD Eject]
SW2016	QSW-K0003AWZZ	J	AD	Switch,Key Type [MD Record]
SW2017	QSW-K0003AWZZ	J	AD	Switch,Key Type [Tuning Up]
SW2018	QSW-K0003AWZZ	J	AD	Switch,Key Type [Tuning Down]
SW2019	QSW-K0003AWZZ	J	AD	Switch,Key Type [Enter]
SW2020	QSW-Z0003AWZZ	J	AH	Switch,Rotary Type [Jog Dial]
SW2021	QSW-K0003AWZZ	J	AD	Switch,Key Type [CD Tray 1]
SW2022	QSW-K0003AWZZ	J	AD	Switch,Key Type [CD Tray 2]
SW2023	QSW-K0003AWZZ	J	AD	Switch,Key Type [CD Tray 3]
SW2024	QSW-K0003AWZZ	J	AD	Switch,Key Type [CD Disc 1]
SW2025	QSW-K0003AWZZ	J	AD	Switch,Key Type [CD Disc 2]
SW2026	QSW-K0003AWZZ	J	AD	Switch,Key Type [CD Disc 3]
SW2027	QSW-K0003AWZZ	J	AD	Switch,Key Type [Surround]
SW2028	QSW-K0003AWZZ	J	AD	Switch,Key Type [Surround Mode]
SWB101,102	QSW-F0353AFZZ	J	AD	Switch,Leaf Type [Cam1,2]
SWB103,104	QSW-F0353AFZZ	J	AD	Switch,Leaf Type [Cam3,4]
SWB105	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD Eject]
SWB106	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD Tray Close]
SWB107	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD In]
SWB108	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD Set]
TP751	92LCONE6P5267X	J	AC	Plug,6Pin [Test Point]
UN121	VHLSPS4201/-1	J	AK	Remote Control Receiver, LSPS4201

MD MECHANISM PARTS

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
1	NGERH0541AFZZ	J	AC	Gear,Drive
2	NSFTM0279AFFW	J	AE	Shaft,Drive Screw
⚠3	RCTRH8153AF10	J	BU	Optical Pickup Unit
4	MSPRP0726AFFJ	J	AA	Spring,Shaft
5	MSPRP0772AFFJ	J	AA	Spring,Drive Grip Plate
6	LANGF1528AFZZ	J	AK	Pickup Guide Bracket Ass'y
7	XWSSD14-05000	J	AA	Washer,ø1.4×0.5mm
8	LX-BZ0804AFFF	J	AA	Screw,ø1.4×2.2mm
9	LX-BZ0824AFZZ	J	AA	Screw,ø1.4×3mm
10	LANGF1526AFZZ	J	AD	MD Pickup Guide (A)
11	NSFTM0277AFFW	J	AC	Shaft,Pickup Slide
12	MLEVF2515AFZZ	J	AG	Cam Plate Ass'y
13	MSPRD1321AFFJ	J	AB	Spring,Lack
14	NGERH0558AFZZ	J	AC	Gear,Lack
15	LX-WZ9269AFZZ	J	AA	Washer,ø1.2×ø3×0.25mm
16	LCHSM0902AFZZ	J	AL	Drive Plate Ass'y
17	MLEVF2518AFZZ	J	AC	Arm, Magnetic Head Up Shift
18	MSPRD1318AFFJ	J	AB	Spring,Shift Arm
19	LANGF1527AFZZ	J	AD	MD Guide (B)
20	NSFTM0278AFFW	J	AC	Shaft,Pickup Guide
21	LX-BZ0850AFZZ	J	AB	Screw,ø1.7×7mm
22	NGERH0542AFZZ	J	AD	Gear,Loading (A)
23	NSFTM0280AFFW	J	AC	Shaft,Loading Gear
24	MSPRP0795AFFJ	J	AC	Spring,Drive Shaft
25	LX-BZ0848AFZZ	J	AB	Screw,ø1.7×9mm
26	LX-BZ0851AFZZ	J	AB	Screw,ø1.7×2.5mm
27	LX-BZ0849AFZZ	J	AB	Screw,ø2×2.2mm
28	NGERH0540AFZZ	J	AC	Gear,Loading (B)
29	MLEVF2538AFZZ	J	AL	Roller Arm Ass'y
30	LX-WZ9268AFZZ	J	AA	Washer,ø1.5×ø3.2×0.5mm
31	MSPRT1566AFFJ	J	AB	Spring,Roller Arm
32	LX-BZ0846AFZZ	J	AB	Screw,ø1.7×3mm
33	LHLDX3127AFZZ	J	AL	Cartridge Holder Ass'y
34	MLEVF2536AFZZ	J	AF	Arm,Holder
35	LX-BZ0883AFZZ	J	AB	Screw,ø1.7×5mm
36	MSPRD1319AFFJ	J	AB	Spring,Holder Arm
37	RCILH0105AFZZ	J	AX	Magnetic Head
39	LX-BZ0880AFZZ	J	AC	Screw,ø2×2.2mm
40	MSPRT1565AFFJ	J	AC	Spring,Disc Motor
41	MLEVP1033AFZZ	J	AC	Clampa
42	MLEVP1034AFZZ	J	AC	Lever,Catch
43	MSPRD1334AFFJ	J	AC	Spring,Catch Lever
45	PCOVW8151AFZZ	J	AB	Cover,Head Guide
46	PCUSS0681AF00	J	AC	Cushion
100	KRPLF0006AF01	J	BP	MD Mechanism Ass'y
401	PCOVS3156AFFW	J	AH	Cover,Shield,Top
402	PCUSS0654AFZZ	J	AB	Cushion,Head
404	QCNWN6603AFM1	J	AQ	MD Flat Cable,24Pin
405	PCOVS3158AFFW	J	AH	Cover,Shield,Bottom
406	LANGK0880AFFW	J	AL	Frame
407	PCUSG0531AFSA	J	AD	Cushion (A)
408	PCUSG0531AFSB	J	AD	Cushion (B)
409	LHLDZ1126AW00	J	AC	Holder,MD Mechanism,Left
410	LHLDZ1127AW00	J	AC	Holder,MD Mechanism,Right
501	XBPSD20P04K00	J	AA	Screw,ø2×4mm with Washer
502	XSPSN17P03K00	J	AB	Screw,ø1.7×3mm
503	LX-BZ0852AFFD	J	AC	Screw,ø1.7×8.9mm
504	XBPSD20P08KS0	J	AA	Screw,ø2×8mm
M1951	RMOTV0464AFZZ	J	AP	MD Slide Motor Ass'y
M1952	RMOTV0472AFZZ	J	AU	MD Disc Motor Ass'y
M1953	RMOTV0465AFZZ	J	AP	MD Loading/Head Motor Ass'y

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
SW1951A/B	QSW-P1005AFZZ	J	AF	Switch,Push Type [Disc Protect/Disc Media]
SW1953	QSW-M0157AFZZ	J	AD	Switch,Slide Type [Lead In]
SW1954	QSW-M0159AFZZ	J	AC	Switch,Push Type [MD Play]
SW1955	QSW-M0159AFZZ	J	AC	Switch,Push Type [MD Record]
SW1956	QSW-M0156AFZZ	J	AC	Switch,Leaf Type [Loading]

CD MECHANISM PARTS

301	NGERH0011AWZZ	J	AC	Gear,Middle
302	NGERH0012AWZZ	J	AC	Gear,Drive
303	MLEVP0010AWZZ	J	AC	Rail,Guide
304	NSFTM0002AWFW	J	AE	Shaft,Guide
305	PCUSG0427AFSC	J	AC	Cushion
⚠306	RCTRH8164AFZZ	J	BF	Pickup Unit Ass'y
306- 1	————		—	Pickup Unit (Not Replacement Item)
306- 2	NGERR0043AFZZ	J	AC	Gear,Rack
306- 3	MSPRC0961AFZZ	J	AA	Spring,Rack
307	PCUSG0001AWSA	J	AD	Cushion
308	PCUSG0004AWSA	J	AD	Cushion
701	92L2R6S+6CZ	J	AB	Screw,ø2.6×6mm
702	92L2TTS+5BB	J	AB	Screw,ø2×5mm
703	92L2S+3PZ	J	AA	Screw,ø2×3mm
704	92L1R5WC3R8R25	J	AA	Washer,ø1.5×ø3.8×0.25mm
M701	92LMTR1854CASY	J	AS	Motor with Chassis [Spin]
M702	92LMTR1854BASY	J	AP	Motor with Gear [Slide]
SW702	QSW-F9001AWZZ	J	AE	Switch,Push Type [Pickup In]

CHANGER MECHANISM

101	LCHSM0037AWZZ	J	AP	Main Base
102	LANGF0024AWZZ	J	AE	Top Board
103	NROLP0007AWZZ	J	AB	Rollar,Cam Guide
104	NPLYR0004AWZZ	J	AC	Pulley,Drive
105	NGERH0052AWZZ	J	AC	Gear,Idler
106	NGERH0053AWZZ	J	AB	Gear,Cam
107	NGERH0054AWZZ	J	AB	Gear,Midle
108	NGERH0057AWZZ	J	AB	Gear,Tray Idler
109	MCAMP0127AFZZ	J	AR	Main Cam
110	MLEVP0056AWZZ	J	AC	Lever,Front Switch
111	MLEVP0057AWM1	J	AC	Rear Switch Lever Ass'y
112	MLEVP0058AWZZ	J	AB	Lever,Tray Lock
113	PGIDM0018AWZZ	J	AF	Holder,Mechanism
114	PGIDM0019AWZZ	J	AE	Holder,Stabilizer
115	LHLDM1008AWZZ	J	AD	Stabilizer
116	PGIDM0017AWZZ	J	AC	Guide,Mechanism Holder
119	GCOVA1152AWZZ	J	AL	Tray,Disc Guide
120	GCOVA1153AWZZ	J	AF	Tray,Disc
121	LANGF0025AWZZ	J	AB	Bracket,Switch
122	NSFTL0001AWZZ	J	AB	Shaft,Tray Change
123	MSPRD0078AWFJ	J	AB	Spring,Tray Switch
124	MSPRD0080AWFJ	J	AB	Spring,Tray Lock Lever
125	MSPRD0079AWFJ	J	AB	Spring,Disc Top
126	NBLTK0028AWZZ	J	AB	Belt,Tray Drive
127	NBLTK0027AWZZ	J	AB	Belt,Cam Drive
128	PMAGF0001AWZZ	J	AF	Magnet
129	92LN-BAND1318A	J	AA	Nylon Band,80mm
130	PGUMS0012AWZZ	J	AB	Tray Rover
131	LANGF0028AWZZ	J	AB	Bracket,Mechanism Holder
132	LCHSM0038AWZZ	J	AK	Changer Box
133	NGERH0055AWZZ	J	AC	Gear,Center
134	NGERH0056AWZZ	J	AB	Gear,Center Tray
135	NGERH0058AWZZ	J	AB	Gear,Tray Drive
136	MLEVP0052AWZZ	J	AC	Lever,Tray Change
137	MLEVP0053AWZZ	J	AC	Lever,Top Joint
138	MLEVP0054AWZZ	J	AC	Lever,Midle Joint
139	MLEVP0055AWZZ	J	AC	Lever,Bottom Joint
801	XBPSD26P04000	J	AA	Screw,ø2.6×4mm
802	XEBSD20P07000	J	AB	Screw,ø2×7mm
803	XEBSD20P06000	J	AA	Screw,ø2×6mm
804	XEBSD26P12000	J	AA	Screw,ø2.6×12mm
805	LX-EZ0005AWFD	J	AA	Screw,Special
806	XEBSD26P10000	J	AA	Screw,ø2.6×10mm
MOB1	RMOTV0373AFM1	J	AQ	Main Cam Motor Ass'y
MOB2	RMOTV0373AFM1	J	AQ	Tray Motor Ass'y
SW101,102	QSW-F0353AFZZ	J	AD	Switch,Leaf Type [Cam1,2]
SW103,104	QSW-F0353AFZZ	J	AD	Switch,Leaf Type [Cam3,4]
SWB105	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD Eject]
SWB106	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD Tray Close]
SWB107	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD In]
SWB108	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD Set]

CABINET PARTS

201	GCABA1163AWSA	J	AY	Front Cabinet
202	GWAKP1012AWM2	J	AP	Net Frame Ass'y
202- 1	————		—	Net (Not Replacement Item)
202- 2	————		—	Net Frame (Not Replacement Item)
202- 3	HDECQ0156AWSA	J	AD	Panel,Remote Control
203	HDECQ0165AWSA	J	AD	Panel,FL Display
205	GDORF0037AWSA	J	AF	MD Lid
206	LHLDZ1124AW00	J	AC	Holder,MD Door
207	MSPRD0027AWZZ	J	AB	Spring,MD Door
208	PFLT-0031AW00	J	AB	Felt
209	JKNBZ0328AWSA	J	AE	Button,CD Operation
210	JKNBZ0305AWSA	J	AD	Button,CD Eject
211	JKNBZ0291AWSA	J	AF	Button,MD Operation
212	JKNBZ0292AWSA	J	AF	Button,CD/MD Edit
213	JKNBK0039AWSA	J	AD	Knob,Jog Dial
214	GCABB1160AWSA	J	AZ	Rear Cabinet
215	JHNDP1015AWM1	J	AF	Handle Ass'y
215- 1	————		—	Cover,Handle (Not Replacement Item)
215- 2	JHNDP1015AWSA	J	AF	Handle
216	LHLDL1003AW00	J	AC	Holder,Handle
217	LANGF0026AWFW	J	AC	Bracket
218	PCUSS0038AWZZ	J	AD	Sound Absorber
219	PFLT-0032AW00	J	AB	Felt
220	PFLT-0033AW00	J	AB	Felt
221	92LRANT1401B	J	AN	Rod Antenna
222	QTANC9003AWZZ	J	AE	Terminal,Rod Antenna
223	JKNBZ0306AWSA	J	AC	Button,CD Eject,1
224	JKNBZ0307AWSA	J	AC	Button,CD Eject,2
225	JKNBZ0308AWSA	J	AC	Button,CD Eject,3
226	PCUSS0039AWZZ	J		Sound Absorber
227	PSPAG0006AWZZ	J	AB	Cushion
228	GCOVA1120AWSA	J	AE	Cover,Disc Tray 1
229	GCOVA1121AWSA	J	AE	Cover,Disc Tray 2
230	GCOVA1122AWSA	J	AE	Cover,Disc Tray 3
231	PSPAI0011AWZZ	J	AB	Cushion,Changer Spacer
236	PRDAR0058AWFW	J	AH	Heat Sink
237	PSLDM3002AWFW	J	AF	FL Shield,Front
238	PSLDM3003AWFW	J	AF	FL Shield,Rear
239	LHLDZ1040AW00	J	AE	Holder,FL
240	LHLDT1061AFZZ	J	AD	Holder,Power Transformer
241	LHLDF1012AWZZ	J	AF	Holder,Display PWB
242	LANGK0052AWFW	J	AD	Bracket,Main PWB/Tuner PWB
243	QCNWN0846AWZZ	J	AC	Tip with Wire
⚠244	92LFS-HOLD1652	J	AB	Fuse Holder
245	92LN-BAND1318A	J	AA	Nylon Band,80mm
246	PCUSZ0006AWZZ	J	AC	Cushion,MD Mechanism Unit
248	TSPC-0428AWSA	J	AC	Label,Specifications
249	92LCAUT1706A1	J	AC	Label,Class 3A
250	92LCAUT1706B	J	AA	Label,Laser
251	92LCUSN1585A	J	AA	Cushion,Leg
252	TCAUS0028AWZZ	J	AB	Label,Class 3B
253	TCAUZ0020AWZZ	J	AB	Caution,CD Changer
254	92LCAUT1451A	J	AB	Label,Warning [UK Only]
255	92LLABL1420A1	J	AC	Label,CLASS 1
256	TLABH0046AWSA	J	AC	Label,Reset
601	XEBSD30P12000	J	AA	Screw,ø3×12mm
602	XEBSD26P10000	J	AA	Screw,ø2.6×10mm
603	XESSD26P12000	J	AB	Screw,ø2.6×12mm
604	XEBSN30P12000	J	AA	Screw,ø3×12mm
605	XWSSJ30-07000	J	AA	Washer,ø3×ø10×0.7mm
607	XHBSD30P10000	J	AA	Screw,ø3×10mm
609	XEBSF30P10000	J	AA	Screw,ø3×10mm
610	XEBSD40P30000	J	AA	Screw,ø4×30mm
611	XEBSD30P10000	J	AA	Screw,ø3×10mm
612	XESSD30P12000	J	AA	Screw,ø3×12mm
613	XHBSD30P08000	J	AA	Screw,ø3×8mm
614	XEBSD30P16000	J	AA	Screw,ø3×16mm
615	XEBSN30P14000	J	AB	Screw,ø3×14mm
616	LX-CZ0011AFFD	J	AA	Screw,ø3×65mm
619	XWSSJ30-07000	J	AA	Washer,ø3×0.7mm

ACCESSORIES/PACKING PARTS

1	SSAKH0023AWZZ	J	AB	Polyethylene Bag,Unit
2	TLABM0036AWSA	J	AC	Label,Feature
3	SSAKA0007AWZZ	J	AB	Polyethylene Bag,Accessories

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NO.	PART CODE	★	PRICE RANK	DESCRIPTION
4	TINSZ0217AWZZ	J	AU	Operation Manual
5	QANTL0001AWZZ	J	AL	AM Loop Antenna
⚠6	QACCB0004AW00	J	BB	AC Power Supply Cord [For UK]
⚠6	QACCE0007AW00	J	AR	AC Power Supply Cord [For Europe]
7	92LBAG1658B	J	AA	Polyethylene Bag,AC Power Supply Cord
8	RRMCG0104AWSA	J	AW	Remote Control
• 8- 1	GFTAB1013AWSA	J	AQ	Battery Lid,Remote Control
9	SPAKC0518AWZZ	J	AN	Packing Case
10	SPAKA0112AWZZ	J	AL	Packing Add.,Left/Right
11	TGANE0002AWZZ	J	AB	Warranty Card [UK Only]
12	TLABE0167AWZZ	J	AB	Label,Bar Code
13	SPAKZ0232AWZZ	J	AC	Pad,Packing Add.,Left/Right
14	SPAKZ0263AWZZ	J	AE	Packing Spacer
15	TCAUH0034AWZZ	J	AB	Caution Bill
16	UDSKM0001AFZZ	J	AZ	Recording Mini Disc

P.W.B. ASSEMBLY (Not Replacement Item)

⚠	PWB-A1~3	92LPWB2537MANS	J	—	Main/Power/Tuner (Combined Ass'y) [UK Only]
	PWB-B1~4	92LPWB2537DPLS	J	—	Display/Switch A,B,C (Combined Ass'y) [UK Only]
	PWB-C	92LPWB2537CDUS	J	—	CD Servo [UK Only]
	PWB-D	QPWBF0027AWZZ	J	—	CD Motor (PWB Only) [UK Only]
	PWB-E	DCYO-2956AF93	J		MD Main [UK Only]
	PWB-F1,2	DUNTZ0761AF03	J	—	MD Mechanism Switch/Motor (Combined Ass'y) [UK Only]
	PWB-G	92LPWB2537SRSS	J	—	SRS [UK Only]
	PWB-H	92LPWB2537CHGS	J	—	CD Changer [UK Only]
	PWB-J	QPWBF0322AWZZ	J	—	Tray Switch (PWB Only) [UK Only]

OTHER SERVICE PARTS

	QCNWK0035AFZZ	J	AN	Extension Cable (24Pin)
	QCNWK0038AFZZ	J	AF	Extension Cable (26Pin)
	QCNWK0043AFZZ	J	AG	Extension Cable, TP751 (6Pin)
	QCNWK0059AFZZ	J	AF	Extension Connector (2Pin)
	QCNWK0060AFZZ	J	AH	Extension Connector (5Pin)
	QCNWK0061AFZZ	J	AK	Extension Cable (5Pin)
	RRCDT0101AFZZ	J	CB	Test Disc,Low Reflection
	RRCDT0103AFZZ	J	BK	Head Adjusting Transparend Disc
	RUNTK0385AFZZ	J	BS	Extension PWB
	UDSKM0001AFZZ	J	AZ	Recording Mini Disc

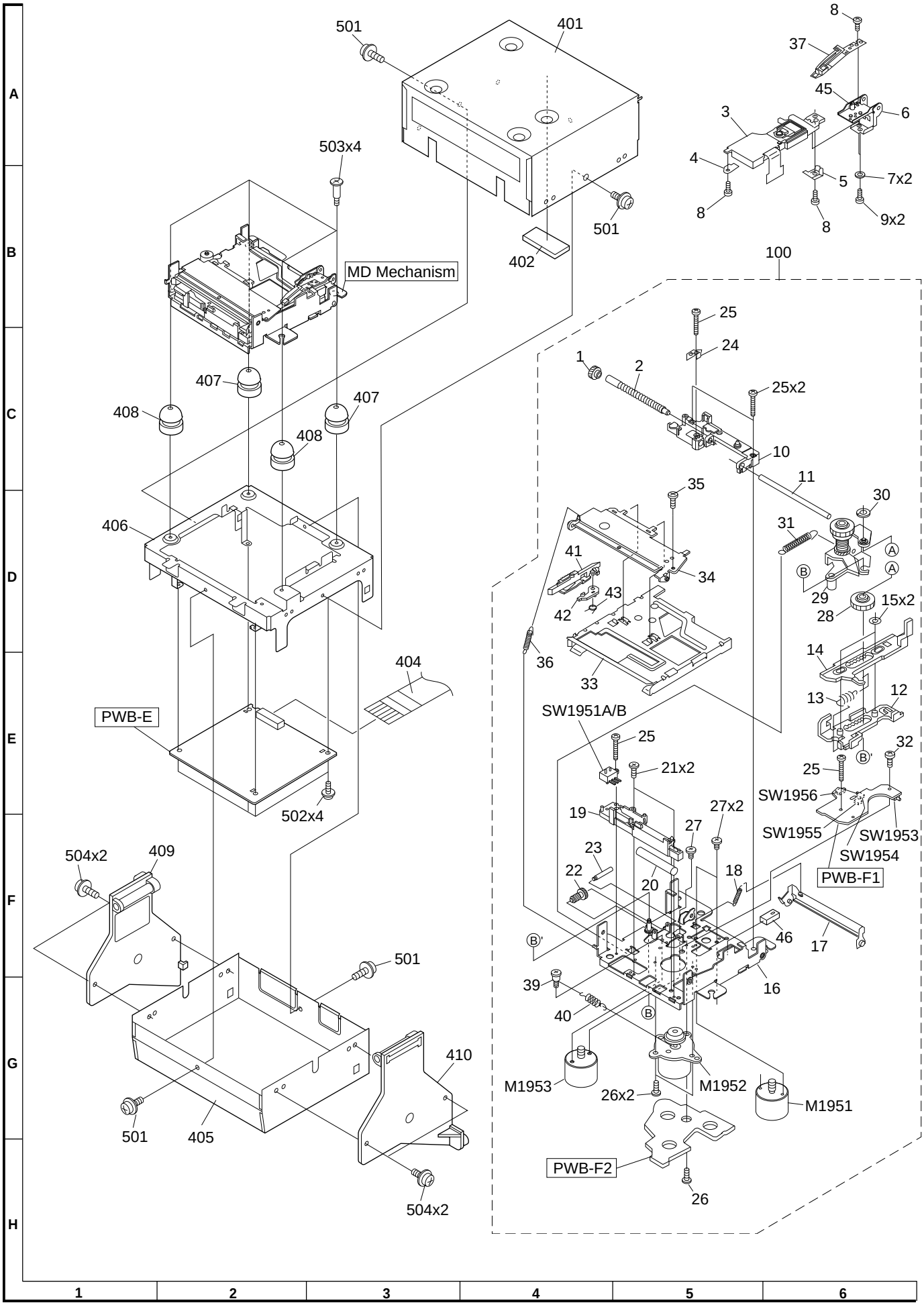


Figure 10 MD MECHANISM EXPLODED VIEW

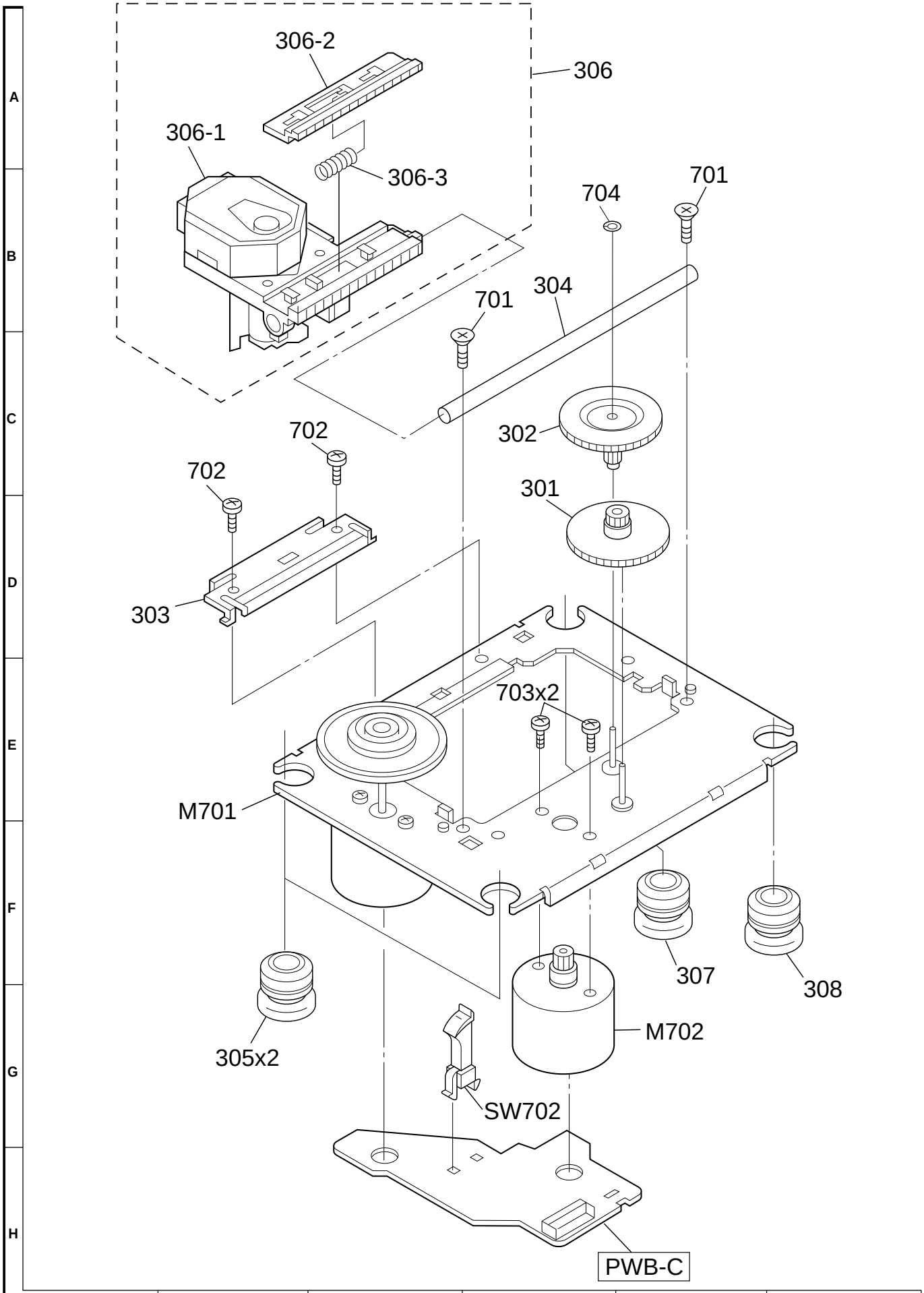


Figure 11 CD MECHANISM EXPLODED VIEW

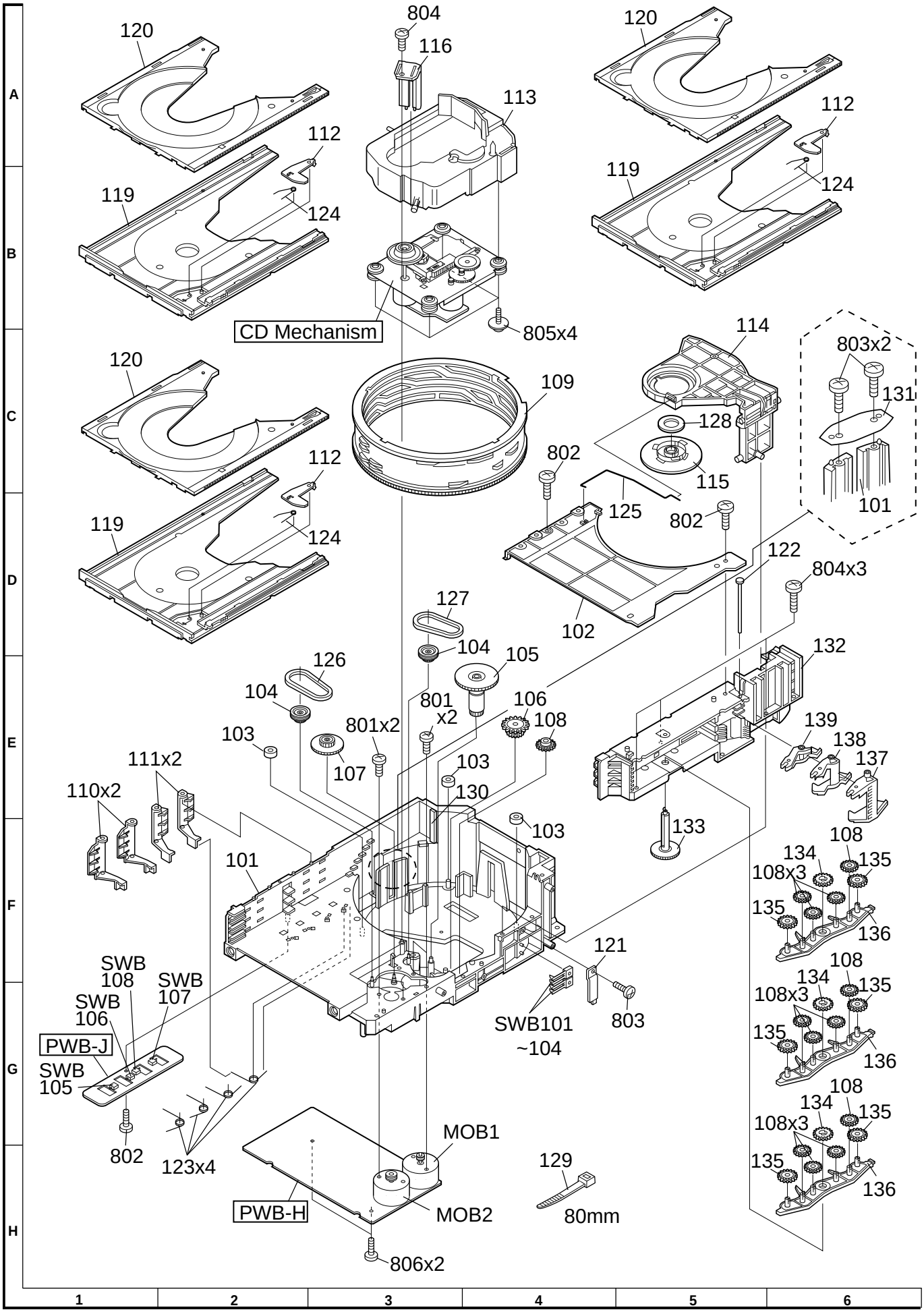


Figure 12 CD CHANGER MECHANISM EXPLODED VIEW

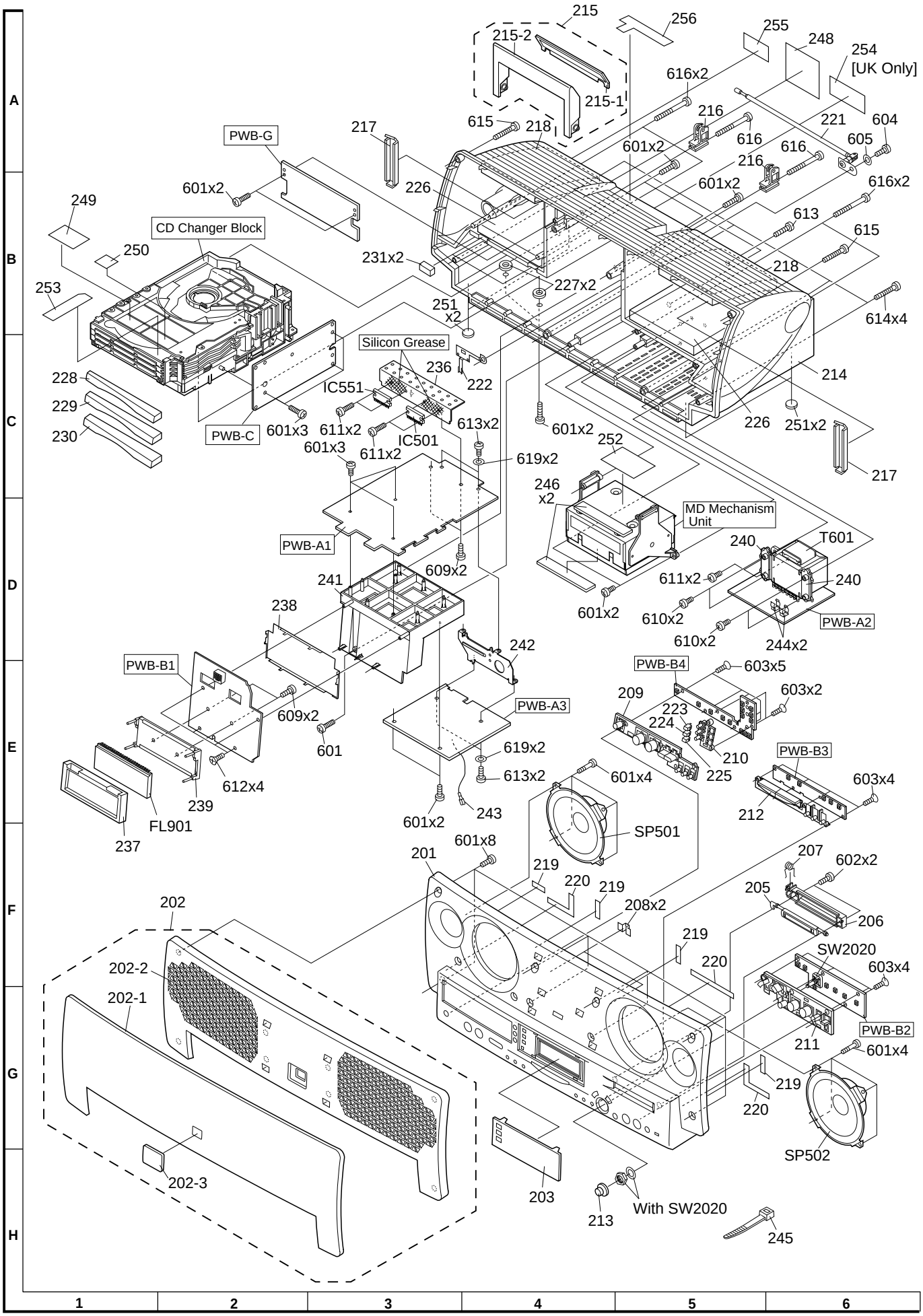


Figure 13 CABINET EXPLODED VIEW

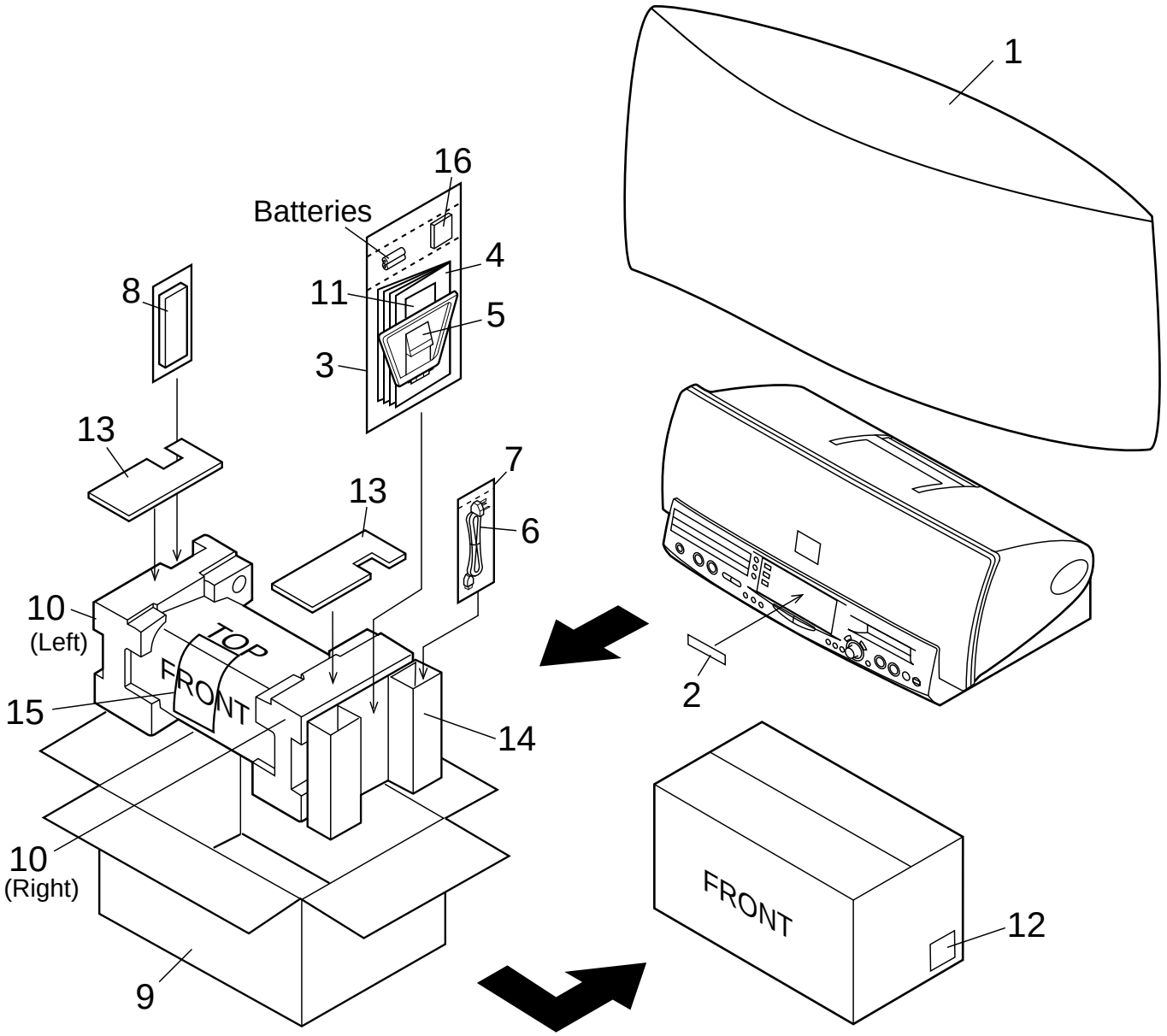
- MEMO -

MD-ZV30H

PACKING OF THE SET (FOR UK ONLY)

Setting position of switches and knobs	
Input Level	MAX

1.	Polyethylene Bag, Unit	SSAKH0023AWZZ
2.	Feature Label	TLABM0036AWSA
3.	Polyethylen Bag, Accessories	SSAKA0007AWZZ
4.	Operation Manual	TiNSZ0217AWZZ
5.	AM Loop Antenna	QANTL0001AWZZ
6.	AC Power Supply Cord	QACCB0004AW00
7.	Polyethylen Bag, AC Power Supply Cord	92LBAG1658B
8.	Remote Control	RRMCG0104AWSA
9.	Packing Case	SPAKC0518AWZZ
10.	Packing Add., Left/Right	SPAKA0112AWZZ
11.	Warranty Card	TGANE0002AWZZ
12.	Bar Code Label	TLABE0167AWZZ
13.	Pad, Packing Add., Left/Right	SPAKZ0232AWZZ
14.	Packing Spacer	SPAKZ0263AWZZ
15.	Caution Bill	TCAUH0034AWZZ
16.	Recording Mini Disc	UDSKM0001AFZZ



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